

CB HORIZONS

DECEMBER 1963

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WHAT PROTECTION DO YOU HAVE FROM DIATHERMY?

First Complete Report — Inside

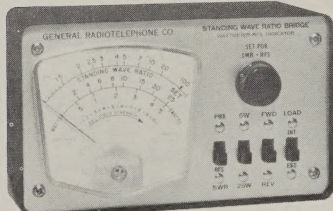


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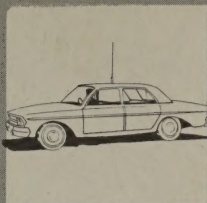
Under present rules part 19.32 the FCC does not provide for more than five (5) watt input in the citizens Radio Service (26.965 - 27.255 MC Band).

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OZZIE'S MAIL- BOX

Ozzie—

Enclosed you will find our check for a subscription to CB Horizons and membership in the ACBA. We have yet to purchase our CB radios, but will need three sets. Shall I write the FCC for application blanks for our license? Or can we get form 505's someplace else?

Mrs. Ruth Logue
Tribune, Kansas

Ruth:

The Federal Communications Commission, Washington, 25, D.C. (Attention: Secretary Ben F. Waple) does have form 505's. There is no charge for them from the Commission. Most CB dealers also have forms, as do CB clubs. And nearly every transceiver manufacturer packs a form in with his transceiver instruction manual. However you will need to have your license in hand before you can legally operate your transceiver. This usually requires from 7 to 10 week, so get the forms filed long before you plan to use your radios!

Ozzie

Ozzie—

I read your letters column every month and appreciate the frankness with which you treat reader's problems. My problem is that I have been told that only one FCC CB license can be issued to a family. In other words, my wife can't have a license of her own. If she could have one, and I should lose mine for a rule infraction, will the FCC take hers also?

Larry Parkhurst
KHB3971
Columbia City, Indiana

Larry:

Sounds like you are trying to outfox Uncle. Contrary to what you have been told, the FCC would much prefer that you and your wife have separate calls. However this means you must have separate rigs, to be completely legal. And that's from antenna to microphone. And that also means that if and when FCC rules limiting communications between different stations to certain channels become final, you and your wife will have to get on the same station's equipment to talk off of these specified channels. Finally, if the Commission lifts your license because you violate the rules, they wouldn't lift your wife's if she has been a good girl, and if she has a different station than you. However, if they catch you using her station, after they have lifted your license, they'll probably slap her with a citation for allowing you to operate. It gets sticky and the best solution is to play it clean and keep your own license!

Ozzie

Dear Ozzie—

Having tried several types of ham band receivers for CB DXing, with several types of antennas, I find these sets almost useless on 11 meters. What gives and how come?

Lawrence Frazier, 9Q1159
Silsbee, Texas

Lawrence:

Glad you asked. Most ham-band receivers, or general coverage shortwave receivers are designed to operate over a wide range of frequencies from 1.8 megacycles up to around 30.0 megacycles. Consequently because they require coverage of nearly 29 megacycles of shortwave spectrum, they are not tuned and peaked by the manufacturers on any one range in sensitivity and designed for maximum selectivity, on our band. The CB ONLY transceiver or receiver can be peaked to a fine degree, something you will seldom find for a particular range of frequencies, in a general coverage or ham band receiver. For CB, CB equipment is by far the best!

Ozzie

Dear Ozzie—

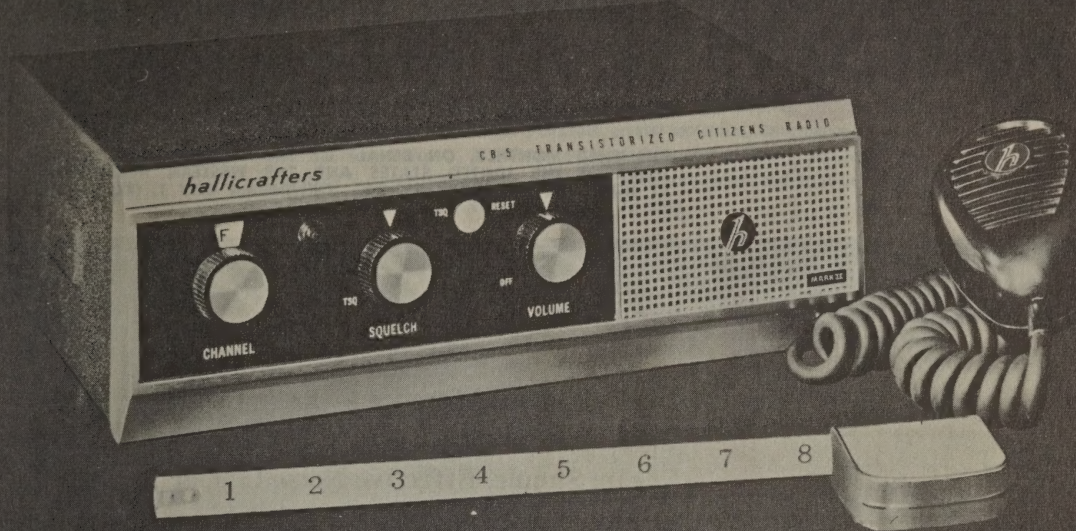
I read your April (1963) issue concerning beam antennas. A leading manufacturer puts out a five element beam that he claims has 12.7 db gain. I plan to purchase two of these five element beams and mount them 1/2 wave apart. This should give me 16.2 db gain. Now if I could mount this beam on a 75 foot tower. I should gain an additional 6 db of gain over a standard ground plane only 20 feet above ground. Will I then have 22.2 db gain? Will it work Ozzie?

Don Block, 19QAO164
Westlake, Ohio

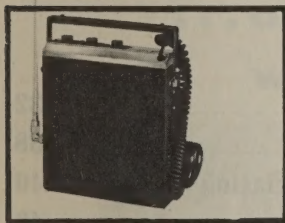
Don:

If a single beam has an actual forward gain of 12.7 db, the addition of a second identical beam 1/2 wave away, and properly phased, will earn you from 2.5 to 3.0 db additional gain. This makes a total of 15.2 to 15.7 db gain over a reference dipole, not over a ground plane such as the CLR or Magum. Both of these antennas have gain over a dipole. Going up to 75 feet on the tower may give you 6 db height gain over a ground plane at 20 feet, but then again you may lose part of this 6 db gain when you consider the affects of the tower on the antenna pattern, and consider the feedline loss when you extend it to the 75 foot level on the tower. Lastly, the new (proposed) regulations make it pretty tough to mount any beam on 'any tower' more than 20 feet above roof or ground. Do some careful checking of the proposed Part 19 and a little more engineering of your new antenna system before you sink alot of cash into the new array

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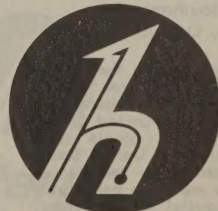
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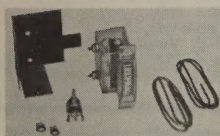
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OUR COVER

This month's color credits go to the E. F. Johnson Company, Waseca, Minnesota. Johnson's field demonstration of their brand new all transistorized "Messenger Three" 11-channel transceiver finds one of these units mounted with battery pack undergoing evaluation near Waseca.

The new unit comes as close to being an all around communications system as most would desire.

In addition to the 11 channels on transmit and receive, and the all transistor design, the unit is available to operate from 12 volts dc, 117 vac or with an optional

nickel-cadmium battery pack.

The set has double conversion, and doubles as a three watt public address system, either from its battery pack or more conventional power.

With the battery pack and case comes a battery condition meter which tells you how much charge you have remaining in each of the two batteries in the case. When one battery gets low, you simply switch to the second battery. The batteries are re-chargeable from 117 vac when the unit is resting at the base.

The new unit will be on display at Johnson dealers all across the country this month.

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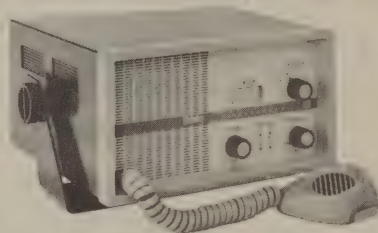
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SEND ORDER TO: 1963 SUMMER CALL-BOOK
Oklahoma City 1, Oklahoma
P.O. Box 1557



CB Bonanza Harvest Time

Harvest time is here and the CB Bonanza of prizes is CB Horizons' way of helping you get in on the occasion. This month's Bonanza Giveaway is the new Webster 412 transceiver, a fine five channel set with provision for selective tone calling and front panel crystal sockets. Fill in your Bonanza card and mail it to CBH. If you have your local CB dealer sign it first you'll be eligible for a \$25.00 First Place Cash Bonus, in addition to the transceiver!



— plus — plus — plus — plus — plus — plus — plus — plus —

**See your local dealer
about these new CB products
now on display!**

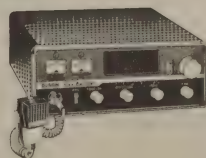
Lafayette's new HB-115 8 Channel transceiver with 23 Channel tuneable receiver. Priced at \$59.95.



Antenna Specialists' new MR-77 dual polarization beam, horizontal or vertical at the throw of a switch. A real range-getter! Net is \$59.95.



Olson Electronics' 23 channel sideband (BSBRC) dual conversion crystal controlled transceiver, at all Olson stores now, priced at \$219.95.



DIATHERMY

Is there a CB'er in the land that has not experienced the nerve-racking droning hash on his receiver that comes from a medical or scientific device?

Probably some live so far from centers of population they have never heard a sliding-whining diathermy 'machine' come on the air.

But most of us live in towns or cities where these devices operate, and to us staying out of their way is a way of life!

You are a CB'er or are about to be one. You have in your possession (according to your sworn statement on Form 505) a copy of Part 19. You have read and understood it.

You have noted, for example, that paragraph 19.31 (c) tells you that you are subject to whatever radiation interference may result from medical or scientific devices operating on a frequency of 27.12 megacycles (between channels 13 and 14).

And you have also sworn, and agreed on your application Form 505, that you will operate subject to whatever interference may result to your operation from such devices.

Our question to the readers of CB Horizons is this.

How much interference are you required to tolerate, from such devices, before you scream for help from the FCC?

It is possible, for instance, for a diathermy (therapeutic treatment) machine, operating in a local hospital or doctor's office, to be running beyond the extent of its legal permissible radiation.

All diathermy equipment, even that equipment which supposedly has been built

to FCC restrictions, and has been installed according to FCC rules, can run amuck.

Unfortunately, much of the equipment sold is capable of being run properly but is not because it is installed by people who are salesmen first and installers second.

What do we do to bring the FCC out of their cocoon and into the field to check on possibly mal-functioning diathermy equipment?

FIRST OF ALL . . .

. . . we make an effort to learn what a medical radiation treatment is, how it operates, and what signs to look for when a machine runs amuck.

Industrial, scientific and medical equipment is covered much like Part 15 (limited power restricted radiation device equipment) gear, except it is done through a little known portion of the Commission's rules and regulation, Part 18. Your club, if it is interested in preventing un-due diathermy interference in your city, should obtain a copy of Part 18 from the **Government Printing Office, Washington 25, D. C.** Price is \$2.00 per copy.

Part 18 is divided into subparts according to the function of the equipment being operated. Section 18.2 defines the various categories of equipment, such as medical diathermy, industrial heating, ultrasonic equipment, and others.

Section 18.2 defines "Medical Diathermy equipment" as any device that utilizes a radio frequency oscillator (such as is found in your CB transceiver), or any other type of radio frequency generator, and transmits radio frequency energy useful to therapeutic purposes.

Paragraph (e) of section 18.2 notes that the radio frequency (transmitted) power from a diathermy device is **neither used nor intended to be used** for radio communication.

So now we know that a diathermy machine is a radio transmitter that uses the power it generates to perform medical treatments, with no thought to using the radiated signals for communication purposes.

SECOND OF ALL . . .

. . . any radio transmitter must have a frequency. The FCC didn't want it operating just anywhere, so they picked:

13.560 mc/s 27.120 mc/s 40.680 mc/s

A recent survey of more than 70 units manufactured for industrial, scientific or medical radiation service, as outlined in Part 18, indicates that 61 of these have chosen 27.12 megacycles to operate. Such units are, for the most part, medical in nature. But some are also utilized for ultra-sonic high frequency audio wave treatment of metals and plastics for structure defect detection, heat sealing of radio and television tubes in factories where such items are manufactured, and endless other manufacturing processes where radio frequency energy can provide heat to do a job.

Since most units are medical in design, let's assume that if you have been experiencing 11 meter 'noise' interference, it is likely to be originating in a nearby doctor's office or hospital.

Before we leave the heat sealing and other devices, however, let us mention a unit we discovered in the Los Angeles basin area of California, while researching this report.

Under the provision of Part 18, equipment can operate on 27.12 if it is designed to comply with the rules. In the Los Angeles area, following down a report from a CB Club that a gosh-awful diathermy noise was wiping out 23 of the 23 channels, our reporter traced the noise source to an industrial park.

Further exploration revealed that a large building housing an electron tube manufacturing plant (not a major line, nor one that manufactures tubes for communications purposes) was using a 20,000 watt oscillator on 27.12 megacycles for heat seal-

ing of tube envelopes!

Now the 20 kw transmitter may not in itself be illegal, unless it radiates its signal beyond the limits the FCC establishes governing such units.

In this case a long set of copper tubes, used in the heat-sealing process, were connected to the outlet of the 20 kw oscillator. The tubing ran approximately 90 feet down one side of a work-line table and then doubled back to the oscillator. 180 feet in all, remarkably close to an end fed 5 wavelength (36 feet times 5) antenna for 27.12 megacycles.

The signal from this monster was S9 over 5 miles away!

Not all diathermy machines, located in physicians offices or hospitals, are this lethal.

In fact, the FCC has established a set of standards by which they determine whether or not a diathermy machine of any kind is within the bounds of the law or not.

If you or your CB Club are to become a mounted diathermy vigilante squad, you will need to know how the FCC makes their radiation intensity measurements.

The only way you can determine whether or not a diathermy machine is running beyond acceptable radiation limits (and thereby determine it is overstepping the laws) is to measure its signal strength. The FCC has a set of standards, which includes utilizing an acceptable **calibrated** signal strength meter, and, making measurements at specified distances from the diathermy machine.

If you are a competent operator of the signal-strength meter (an FCC acceptable meter), and if you make the measurements of the diathermy machine's signal at FCC specified distances from the machine, you will quickly know how much out of line, if at all, the machine is.

If you find a machine doing too much radiating (or too much deviating, which we'll discuss shortly) then you proceed to file a full report with your regional or local FCC office.

SERVICE . . .

CB Clubs, and others so interested, can provide a real service to their areas by pursuing a vigorous program of diathermy machine check-up as reported cases of interference arise. It is likely that many, if not

most machines, will check out OK. But the machine that does not conform can be a constant source of interference, and it can be taken off the air until it is put in order.

"Medical diathermy machine operators are normally responsible for taking steps to eliminate interference to radio reception, irrespective of the type approval status of the interfering diathermy machine.

"The simplest test to conclusively determine that interference is being caused by a specific piece of equipment may be carried out by observing whether interference occurs when you turn on and off the suspected machine, and listening for changes in interference on the receiver.

"Medical diathermy machines do not have to create interference in order to operate.

"Interfering radiations are not essential to medical diathermy treatments and have no bearing on the therapeutic effectiveness of a well designed diathermy machine. Properly engineered diathermy equipment may normally be expected to operate without producing interference; equipment of a very early (usually prior to 1952) design may be operated within the confines of a shielded room or space in order to eliminate interference.

"If a unit does create interference, beyond the limits specified by the Commission, it may be designed and installed so that under normal conditions of operation harmful interference to authorized radio signals is unlikely." In a release numbered "FE & M Bulletin, No. 10, Revised August 10", the FCC said all of the preceding quoted material, and a great deal more.

The law is there. All we have to do is apply it!

APPLYING IT

Interference in the 27 megacycle band can be band-wide. The center frequency of 27.120 megacycles (between channels 13 and 14) can actually extend 160 kilocycles either side of this frequency, or from 26.960 to 27.280 megacycles. This covers all 23 CB channels and then some.

Now comes the engineering fun. Measuring the signal strength of the diathermy machine requires patience, skill and knowledge of what you are doing. The FCC sets down the standards, and they also tell us that the person making the qualified

measurement must be sufficiently skilled to know what he is doing, and how to interpret his findings. The meter-reader does not need to be a first, second or any class of radio telephone or telegraph operator. The Commission says this. But, he does have to be sufficiently versed with radiation measurement equipment and techniques to back up his finding before the FCC should they challenge his report.

MEASURING TECHNIQUES

Paragraph 18.13 spells out how you go about measuring field intensity of diathermy radiation.

The Commission does not type approve field intensity (signal strength) meters. However they do refer you to a meter which "has been generally accepted and used by engineers and conforms to standard radiation measurement techniques." A local broadcast station engineer in our area can probably lend you such a meter.

The meter in use shall be capable of tuning the entire 27 megacycle band. Many meters available do not tune above 18 megacycles, so you may have to do some searching.

The antenna utilized for diathermy field intensity measurement must be a $\frac{1}{2}$ wave dipole. Refer to figure 2.

Field intensity measurements are made at five (5) points equally spaced (one every 72 degrees approximately) about a circle 1,000 feet in radius, from the unit in question. See figure 3.

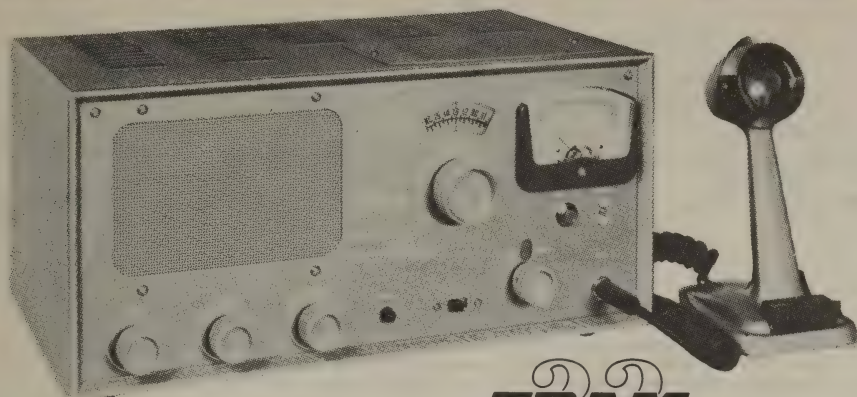
The measurements made with the $\frac{1}{2}$ wave dipole type antenna refer to maximum signal intensity at each of the 5 points, regardless of the polarization of the dipole antenna when the maximum intensity is recorded.

The antenna should be 12 feet above ground (lowest antenna point to ground), although the FCC says you can lower the antenna closer to ground if you find more signal down close to earth.

If, due to equipment or buildings or terrain in the area you are not able to make measurements in accordance with the FCC suggested regulations, you can resort to "good engineering practices".

The FCC states that an ISM device must not radiate more than 25 microvolts per

TRAM TR-27E TRAM



23
TRAM

ANOTHER STEP FORWARD IN CB COMMUNICATIONS TR-27E BASE STATION

Transmitter

70% or better Transmitter efficiency provides 3.5 watts guaranteed minimum RF Output with 100% High Level Modulation. (Keyed Compression - Base Station)

Receiver

Sensitivity - .1 uv. for 300 milliwatts of audio
Selectivity - 5 kc. @ 6 db. Adjacent channels 60 db. down
Signal to Noise Ratio - .3 uv. for 10 db.

TRAM SERVICE TIP No. 3

ANTENNA TRANSMIT MATCHING PADDER

All TRAM CB radios are adjusted at the factory to match a 50 ohm resistive load.

Adjustments of more than plus or minus 1/2 turn from the factory setting are abnormal. When an adjustment of more than 1/2 turn is required to provide maximum power transfer to antenna, check the standing wave ratio. If the SWR is high and cannot be reduced by antenna adjustment, cut off approximately two feet of coax cable and note trimmer setting. If cutting two feet does not bring the trimmer to proper setting, remove two more feet.

Reducing the SWR by properly tuning and matching the antenna is the best and preferred method of obtaining the correct impedance.

It should not be necessary to adjust the final plate trimmer. Match with antenna matching padder only.

The TRAM 23 base station, renowned for its superior performance and dependability under the most exacting conditions, is now offered in an improved model, the TR-27E. In addition to the many features that are standard on all TRAM units, you will find:

- The "s" meter is now a D'Arsonval moving coil type with an illuminated panoramic scale, accurately calibrated to 60 db over S9.
- The cabinet now has an extra durable wrinkle finish.
- The 23 channel selector switch carries the channel number illuminated in the panel.
- The receiver overload characteristic is improved by 20 db.
- Adjacent channel rejection is improved by approximately 5 db.
- And in many other respects the overall excellence of TRAM equipment has been given extraordinary consideration and effort.

ALSO AVAILABLE: TR-27D, 8 channel Base Station
TR-70B, 8 channel Mobile
TR-27C, 23 channel Mobile

TRAM ELECTRONICS, INC.
P.O. Box 187, Dept. 12A
Winnisquam, N.H., 03289

Please send by return mail at no obligation, detailed information and specifications on TRAM Citizens Band equipment.

Name Call No.
Street
City Zone
State Zip Code

TRAM

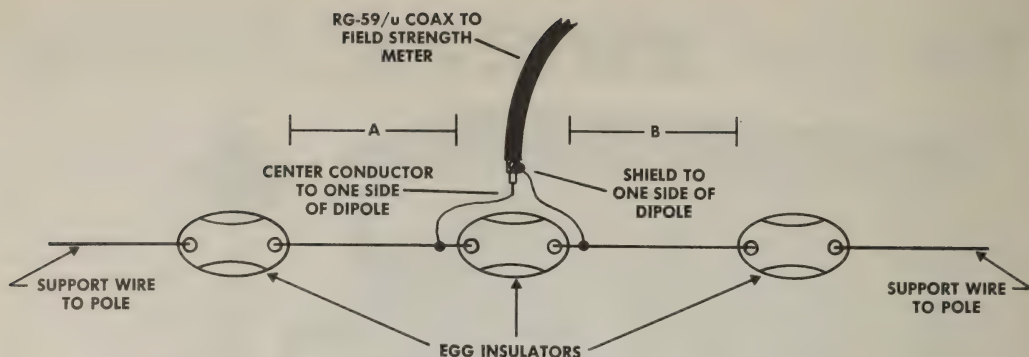


**ELECTRONICS
INCORPORATED**

P.O. BOX 187, DEPT. 12A

WINNISQUAM, N.H., 03289

TEL. 603-524-0622



Simple dipole antenna is fed with 72 ohm RG-59/u cable and suitably connected to the field intensity meter. Construct dipole using small egg insulators and No. 14-18 copper or copper covered steel wire. Distances A and B should be equal, each 9 feet 4 inches long. The antenna can be supported between two portable bamboo or aluminum poles and rolled up on the poles when not in use.

meter at a distance of 1,000 feet or more as explained above, on frequencies outside their operating range.

In everyday English, this means that if your measurements show that above 27.280 mc or below 26.960 mc at a distance of 1,000 feet or more you register (following the above outlined measurement procedure) 25 microvolts of signal on your field strength meter, or more than 25 microvolts, you have a machine that is probably out of kilter.

Note that under present regulations, there is no limitation on the amount of radiation that we should tolerate between 26.960 and 27.280 megacycles!

It is also apropos to note that FCC Report TR-6104, on page 5, states "It is interesting to note that the FCC found it necessary to

demonstrate to the electro-medical industry that a diathermy apparatus could be built which was capable of complying with its rules and which would perform to the satisfaction of the medical profession."

In other words, radiation even within the band 26.960 to 27.280 is not necessary if the equipment is designed and installed (and operated) properly.

REPORTING TO THE COMMISSION

There is no established routine for reporting cases of diathermy interference to CB operation to the FCC. This may change if sufficient CB'ers get interested in cleaning up the diathermy mess.

Is suggested that once you have made proper field intensity measurements and determine that you do have an errant machine, that you sit on your results for

RADIO FREQUENCY INTERFERENCE (RFI) REPORT

CB Horizons

P. O. Box 1557

Oklahoma City 1, Oklahoma

This is a report of RFI interference for engineering evaluation by the Horizons Laboratory staff. Please include all applicable data, or mark **unknown**.

Location (town and address) of RFI source.	CB Channels covered by RFI.	Greatest distance observed	Average hours of operation	Average Number CB units affected
--	-----------------------------	----------------------------	----------------------------	----------------------------------

Report submitted by (CB Call) _____

(name) _____ (address) _____

Date filed _____



Field intensity measurements are made at five points around at 1,000 foot circle which has, as its center, the suspected diathermy machine. Points should be equally spaced around the circle, if possible, 72 degrees apart.

a few days and then return to duplicate your measurements.

If you again find that the machine is operating over its limits (and here we suggest that you not get too excited unless you have readings consistently in excess of 40 microvolts per meter) then you should make up a full report for the Commission. File the report in triplicate with (a) your local or regional FCC office, (b) a copy to the Washington office of the FCC Field Engineering and Monitoring Bureau, and, (c) a copy to the office of Ivan H. Loucks of the Citizens and Amateur Service Division.

Your report should give the name, address (and floor-office number) of the machine's owner, the name and model

number of the suspected machine (if known); the name, address and qualifications of the individual making the field intensity measurements; the name and model number of the meter used for the measurements; a word description (with a sketch showing the area) of the measurements made.

The report should also contain a list of those CB stations complaining of the interference, when the machine is observed in use, and how far (to the nearest 1,000 feet) the interference extends.

If the area affected includes a large radius, say $\frac{1}{2}$ mile or more, a sketch of the region with a circle plotting the interference range and a mark indicating each station affected, should be included.

AND THEN

... sit back and hope the FCC takes the proper action.

Is your group ready to do its part?

Ozzie

ROUGH MEASUREMENT TECHNIQUE

A CB transceiver, equipped with receive crystals for 29.255 and 27.285 (or any adjacent channel to the top and bottom edges of 27.280 and 26.960 respectively), and equipped with an S meter, can be used as a rough estimator of diathermy interference levels.

In four popular transceivers we checked, the amount of signal (input) to the receiver necessary to register an S9 signal on the S meter varied from 25 microvolts to 200 microvolts, reflecting we suspect the fact that different manufacturers use different standards for their S meter scales.

However since none of the four checked required less than 25 microvolts input for an S9 reading, it is believed that a CB receiver outfitted with the proper out-of-band crystals, taking measurements at 1,000 feet or more from the suspected machine could give relatively accurate indications of the diathermy level present.

For purposes of rough comparisons, and keeping in mind the fact that your mobile antenna is considerably less efficient than a dipole antenna specified by the Commission for official measurements, you will probably find that if you have an S9 reading or more on your mobile receiver S meter at distances of 1,000 feet or more, below 26.960 or above 27.280, you will have a fouled-diathermy on your hands.

DIATHERMY REFERENCE MATERIAL

Readers seriously interested in pushing the diathermy interference program are urged to contact the FCC, or the Government Printing Office as noted, for the following pieces of printed matter:

(1) **Volume II of the Commission's Rules and Regulations**, which includes Part 18. Government Printing Office, Washington, D.C. 20402. **Price \$2.00**

(2) **Field Engineering & Monitoring Bulletin, Number 10**. Federal Communications Commission, Washington 25 D.C.. No charge, as long as the supply lasts. Describes rules governing the operation of, medical diathermy equipment with excellent question and answer section.

(3) **Field Engineering & Monitoring Bulletin Number 20, from FCC**. Describes electronic heaters as source of interference. Free as long as supply lasts.

(4) **FCC Docket 14714** (FCC Number 62-1228 25786) which describes new Part 18 rules adopted July 1962. From FCC as supply lasts.

(5) **Report Number TR-6104**, dated September 1, 1961, from the Office of Chief Engineer Technical Research Division, FCC. Excellent discussion on the control of interference from non-licensed apparatus, including Part 15 and 18 equipment. Available from FCC Secretary Ben F. Waple.

CB Project For Your Town

ROAD SIGNS

As CB club groups become more interested in providing real service to their local areas, many clubs soon discover that a surprising number of CB mobiles, from points across the country, mobile through their town each and every day.

With the summer time vacations, the salesman who uses CB, the large number of semi trucks equipped with CB, it should be obvious to all that a real service to traveling CB'ers of any kind would be some type of road signs posted on the major highways into town advising the local calling and monitoring channels.

In the July issue of CB Horizons several readers wrote in the Ozzie letters column

commenting on the fact that "Monitoring-Channel" signs were sadly lacking in most areas of the country.

The appearance of these letters in the Ozzie column brought forth a number of responses from CB club groups across the country who do have road sign programs already in effect.

This article is a report on the status of the CB road sign program in America today.¹
SIGN CONSIDERATIONS

What must a sign do? Obviously, it should inform. Convey information, as it were.

Therefore it should be large enough (18 by 24 is minimum size recommended) to

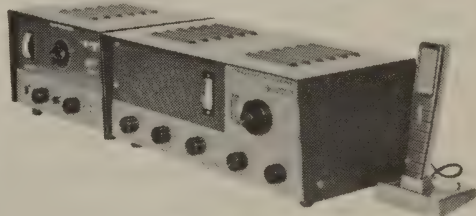


The best mobile CB rig on wheels.

Planning to buy a Citizens Band mobile transceiver? Don't make a move until you've seen the Browning Drake M-523. It's the smallest 23-channel mobile rig you can buy, only 8" x 9" x 3". The Browning Drake will fit perfectly under the dash of your car, no matter what make, and still leave plenty of knee room. Or you may choose the M-506, the six channel version of the Drake. Either way, you get the communication reliability and range you want because the Drake has the same tubes, components and circuitry

that made the Browning base station nationally famous. You can see the Drake and other Browning CB equipment at over 125 franchised service centers across the nation...

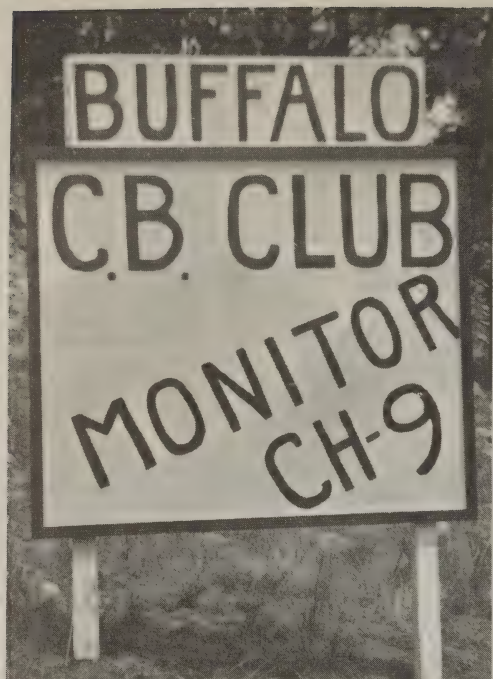
Write us for the name of the one nearest you.



For home, office or business use, see the complete Browning CB base station equipment.



Dept. H , 100 Union Ave., Laconia, New Hampshire 03246



tional signs as posted by state highway departments.

Since the original Ozzie letter appeared, information crossing our desk indicates that most states will not allow permanent erection of signs that are of the diamond or circular design. The reason for this is simply that signs of this shape usually indicate highway instructions, such as intersection, stop, etc., and signs not carrying this type of information are distracting and illegal!

Now since most states do use an oblong sign (such as Metal Craft's 18 by 24 sign) for information services (Road Park Ahead, etc.), the erection of this type of sign for CB Monitoring Channel information apparently is both legal and proper, provided you have the permission of the property owner to erect the sign.

Of course this is not the only form CB Monitoring channel signs could take. The Buffalo, Wyoming group, for example, has constructed wooden signs that are obviously larger than the 18 by 24 inch Metal Craft sign. And it probably fits into the natural vegetation and terrain around Buffalo very well.

ERECTING THE SIGN

All states, towns and counties have codes which regulate how close a sign may be to the roadway, how tall it may be, whether a sign may be installed at all, and a thousand and one other things that city councilmen sit around and dream up in their spare time.

Be very certain that you contact your local highway or street department **before** mounting your signs.

Our advice is this. Go to your local Chamber of Commerce, if you have one, and tell them what you wish to do. Tell them that your CB radio club intends to provide a monitoring service for travelers, and describe how CB works. Let them know that this is a 'public service of your group, and that you are doing it so strangers in town, equipped with CB two-way radio will better be able to obtain eating and lodging, as well as road and detour instructions about your town.

Lacking a Chamber of Commerce, approach the city or county street people with the same story.

be seen; colorful enough to be attractive; and durable enough to withstand the elements.

A metal sign is to be preferred. A metal sign mounted on a metal post is even better.

Silk screening is to be preferred over painted signs since silk screening (if properly applied) will hold the color better through more damaging rain, snow and wind.

COMMERCIAL SIGNS

At least one firm is already manufacturing, commercially, road signs designed for this specific purpose.

Metal Craft Manufacturing Company, Inc., Concord, North Carolina (Bernard W. Cruse, Jr., President) advises that they are in the sign business in many areas and have been turning out CB roadsigns of late for North Carolina club groups.

Metal Craft manufactures a 24 gauge steel, baked white enamel sign measuring approximately 18 inches wide by 24 inches high, that features blue and red silk screen letters.

The metal signs read (per the photo) "CB Monitor — 11" (or any other appropriate channel) and are of the same shape and size as the regular highway informa-

Chances are excellent they will fall all over themselves to be of help and they might even offer to erect the signs for you on existing posts they have, or with their personnel.

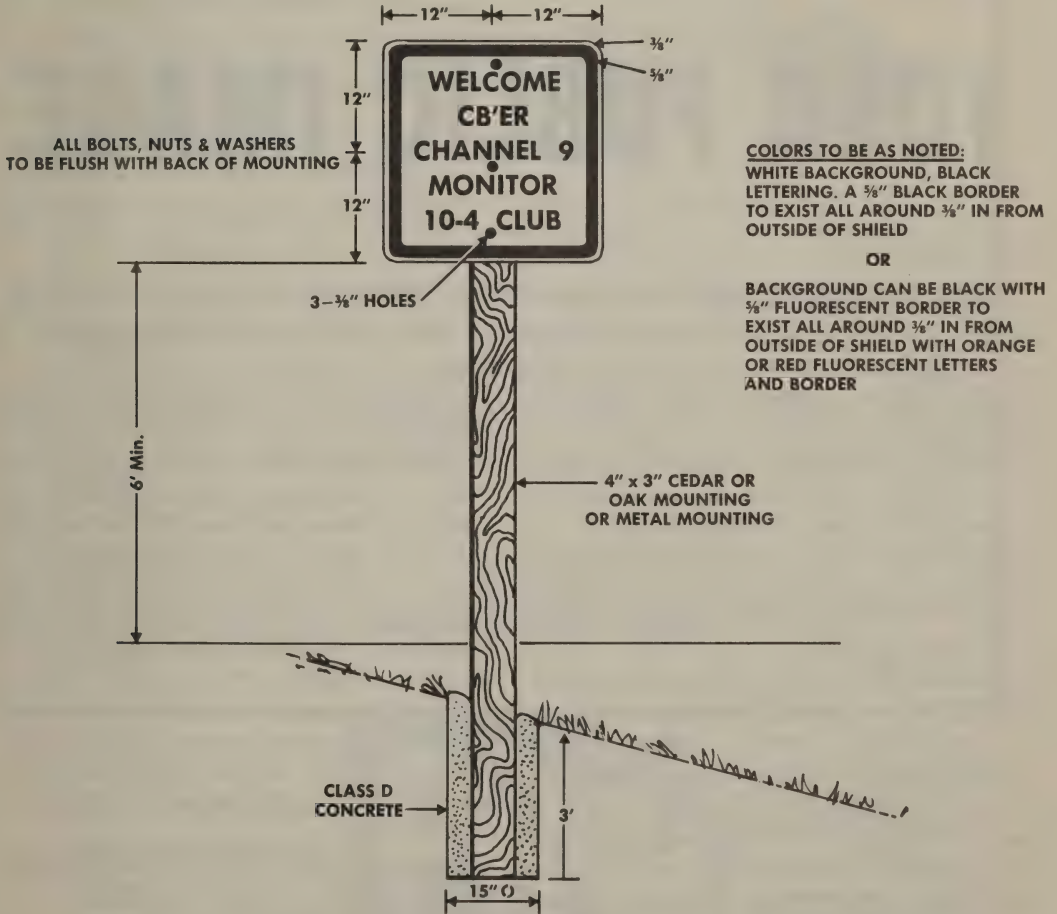
PUBLICITY

When your sign is about to be erected, advise the local newspaper(s) and/or radio-television stations, through a printed press release, of your service to the community. In the case of the newspaper or television station(s), enclosing an 8 by 10 glossy photo showing some of your club officials with one of the city or Chamber officials actually planting the first sign, could mean some very valuable publicity for your group.

Include in your news release the location



of each sign you intend to erect, giving the release more of a useful flavor.



NOTE: ALL SHIELD'S TO BE APPROVED
BY YOUR STATE HIGHWAY COMMISSION
BEFORE INSTALLATION

It is usually helpful and useful to mention in your press releases that these signs will direct travelers to two-way radio contacts with other two-way radio users in your city, thereby giving travelers information about your city and helping them to find local services in town.

A SUGGESTED DESIGN

Reader Carl Kohlman, of Kohlman's Audio Service, LeMay, Missouri sends along a sketch of a do-it-yourself sign which he notes "should meet highway department specifications". He adds that all signs are to be approved by the state highway commission in your state before

installation.

Chances are that if you mount your signs on the outskirts of the city, but inside the city limits, you can get city approval without getting involved with the state people.

METAL CRAFT ORDERING INSTRUCTIONS

Standard three color (red and blue on baked white enamel sign) 18 by 24 inch 24 gauge sign lots of 12 or more—\$5.95 each.

Same signs with Scotch Lite — lots of 2—\$12.95 each; lots of 6—\$11.50 each; lots of 12 or more — \$10.95 each.

Terms — One half with order and balance C.O.D. or, payment in full and they pay the postage.

Note — Be sure to stipulate the channel you wish on your signs.

Order — from Metal Craft Mfg., Inc., Concord, North Carolina.

Self Evaluation —

YOUR PUBLIC IMAGE

One of the most unique and public-spirited CB clubs in the nation today hangs out its CB shingle in a state that, not surprisingly, boasts dozens of alert and well-coordinated CB clubs.

CONTAC (Communications of Necessity to Aid Citizens) is a unit of Civil Defense, a search and rescue organization and a ready-alert team of communications trained volunteers utilizing CB radio as an adjunct to public service not as an excuse for public service participation.

Examining the group-participation records of CONTAC is like following the life-line of a city; Atlanta, Georgia in this case.

On a recent winter morning CONTAC members responded to an early morning apartment house fire that brought firemen and CONTAC volunteers alike out in 3 degree below zero weather, during one of the worst cold snaps the city has been able to re-call.

In this instance it was not communications

that was needed, but hot coffee and relief on the part of the firemen fighting the blaze.

Two CONTAC members, John Clotfelter (KDB2587) and Stan Mislow (KDB0839) brought instant coffee, sugar, and a portable stove to the scene. The pair filled more than 100 coffee cups for the freezing firemen (and that's a twist!) and received an open invitation to come around at the next general alarm, or whenever they felt like it! Immediately CONTAC had won the praise of a public agency.

One of the pair received a second degree case of frostbite on one ear for his trouble, but sure enough he was really, willing and able to participate in the next cold weather exercise.

Just weeks later CONTAC members provided two-way communications for the largest blood drive in the history of the American Legion Post Number one.

CONTINUED — page 48

WORK ALL 23...

with PR Crystals

Channel jammed? Switch to another, and maybe still another. You've 23 channels to choose from . . . and you can get famous PR Crystals immediately in any and all of those 23 frequencies. Get several sets today from your CB Dealer. He'll be glad to supply you with PRs, for he knows that these high-active crystals will help you get the most out of your transceiver. Yes, you'll get the strongest signal possible within power limits. That means maximum amplifier output . . . greater distance . . . clearer reception.

TYPE Z-9R, TRANSMITTER CRYSTALS

Supplied in all 23 Citizens Band frequencies. Calibrated .005%. Hermetically sealed. .486" pin spacing; .050" pin diameter; .758" height above pins; width .720"; depth .309". Be sure to specify channel desired, make and model of equipment.

Type Z-9R — Transmitter Crystals \$2.95 Net



TYPE Z-9R, RECEIVER CRYSTALS

Same specifications as Z-9R Transmitter Crystals. Supplied for all 23 CB channels. Calibrated .005%. Be sure to specify channel number, make and model of equipment.

Type Z-9R — Receiver Crystals \$2.95 Net

MINIATURE TYPES Z-13 AND Z-13P, TRANSMITTER CRYSTALS

New small size, for transistorized and compact equipment. Supplied in all 23 Citizens Band frequencies. Calibrated .005%. Hermetically sealed; .192" pin spacing; .530" height above pins; width .402"; thickness .150". Type Z-13 has .040" diameter pins; Type Z-13P has .017 wire leads instead of pins. Be sure to specify channel number desired, make and model of equipment.

Type Z-13 — Transmitter Crystals \$2.95 Net

Type Z-13P — Transmitter Crystals \$2.95 Net



Z-13



Z-13P

MINIATURE TYPES Z-13 AND Z-13P, RECEIVER CRYSTALS

Same specifications as the transmitter crystals. Supplied for all 23 CB channels. Calibrated .005%. Be sure to specify channel number desired, make and model of equipment.

Type Z-13 — Receiver Crystals \$2.95 Net

Type Z-13P — Receiver Crystals \$2.95 Net

EVERY PR CRYSTAL
IS UNCONDITIONALLY
GUARANTEED

PR Crystals
Since 1934
USE **PR** AND KNOW WHERE YOU ARE
PETERSEN RADIO COMPANY, INC.
COUNCIL BLUFFS, U.S.A.

Visit To Hallicrafters

CBH readers of late have displayed considerable re-newed interest in transistorized CB equipment. This is not at all surprising since a number of manufacturers have also shown keen interest in the transistorization of CB communications equipment. Obviously the CB world is getting the message—if the manufacturers are switching to transistors, there must be good reason.

In line with this interest, and in direct line with our desire to bring to our readers the inner-workings of CB manufacturing plants the nation over, we arranged a visit to The Hallicrafters Company, Chicago, Illinois. Hallicrafters, as we all know, is a long established name in communications equipment in America, and one of the early pioneers in transistor equipment.

By fortunate coincidence our visit provided an advance preview of the new Hallicrafters CB-5 Mark II, a brand new breakthrough in noise-free transistorized design according to Mr. Les Hensch, Hallicrafters' Industrial Products Sales Manager and our host at the plant visit.

Our tour of the plant began with a lengthy discussion on the history of transistorized communications equipment design, ably hosted by Mr. Robert J. Orwin, Chief Engineer at Hallicrafters. Mr. Orwin described the history behind the new unit as well as the latest solid state circuitry which it contains.

When the Citizens Radio Service was first authorized, Hallicrafters responded with the CB-1. The CB-2 and CB-3 followed. To keep pace with the demands of a growing CB population, and ever mounting channel congestion, Hallicrafters introduced the CB-3A, a dual conversion super-selective transceiver, late in 1961.

At the same time the CB-3A was being released to the CB public, Hallicrafters management was making a decision to develop a transistorized unit. A considerable part of the solid state engineering capability had already become a matter of corporate record with the Hallicrafters entry into transistorized amateur and other communications gear. The Aero-Space Division of Hallicrafters had also done considerable work with transistor design.

In October 1962 the first Hallicrafters transistorized CB unit, the CB-5, was put on the counters. This unit contained 18 transistors, offered six crystal controlled channels, exceedingly small physical dimensions allowing it to be installed where other units would not fit, and of course featured the low battery drain of a transistorized unit.

Although performance of this unit was excellent, Hallicrafters was not completely satisfied with the unit. Since the average CB'er does not have the technical knowhow to properly handle ignition, motor or vehicle noise problems, they felt that a fully acceptable transistorized unit must in addition to the conventional automatic noise limiter have all the conducted noise suppression components built into the set. This is no easy problem to tackle, however, since the noise must, according to most present day theories, be eliminated at its source, which must include the generator, points, plugs, voltage regulator and other noisy auto components.

Hallicrafters Engineering Department was accordingly directed to seek unique solutions to the basic noise problems peculiar to transistorized design transceivers. The result of this program is the CB-5 Mark II.

FOR A REAL



Powerhouse Signal



Convert your signal to DOUBLE SIDEBAND MODULATION CONTROLLED CARRIER (DSMCC) with the

ELENCO SIDEWINDER

*Watch the S meters kick up
when you modulate!*



- ★ Goes with the transceiver on any voltage, 110, 12 and 6 volts.
- ★ The SIDEWINDER can be used to advantage with all other accessory units
- ★ No special receiving equipment required.
- ★ No tuning adjustments of any kind required to operate SIDEWINDER.

- ★ Works on 95% of all sets in use;
if the RF power output tube in your set has a screen grid, and
if the screen resistor on this tube is 10,000 ohms or higher,
the SIDEWINDER can be used.

- ★ Standard 90 day warranty, plus LIFETIME service warranty

Available at leading CB dealers nationwide. If no local dealer, order direct from factory. Send check or M.O. for \$30.00. We will ship postage and insurance prepaid. CAN'T WAIT? . . . order by phone, direct dial 219-563-4536, and we will ship same day, C.O.D.

\$29.50

L200 series

LINEAR AMPLIFIERS

Designed for use with transceivers anywhere in the range 26/30 Mc.



L200-AM (illustrated)
less power supply

\$150.00

L200-A, built-in AC supply
for base use

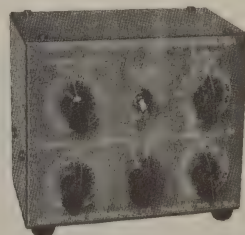
\$225.00

- ★ DC plate power input rating, AM 200 watts;
DSMCC, DSSC, or SSSC 400 watts.
- ★ Drive requirements for maximum rated input,
3 watts AM, 12 watts DSMCC, DSSC, or SSSC.
- ★ Built-in automatic antenna transfer circuit.
- ★ Designed to accommodate remote control operation.

DM-1000 dynamotor supply, to operate either of above units mobile from 12 v. battery, \$75. PS-250 AC power supply, to operate L200-AM on base, \$100.

POWER GAINER

Audio Compression Amplifier



*The standard of comparison
in its field*

Provides transmitter boost
— receiver boost with only
3 connections to your rig.

All models

- PG-1, 110 volts
- PG-12, 12 volts
- PG-6, 6 volts

\$45.

ELECTRONIC ENGINEERING CO. WABASH, INDIANA



Probably the number-one objection to transistorized sets, in general, has been that the receiver is altogether too vulnerable to externally generated noise. Transistors, operating as they do directly from the 12 or 6 volt power source generated in the automobile, have a natural susceptibility to noise-generated-impulses that come to the transceiver along the dc power line. And inasmuch as these noise-impulses can frequently have an instantaneous magnitude (level) equal to or greater than the dc power on the line itself, the noise pulses introduced are many times stronger than the weak 27 megacycle signals being received through the antenna of the system.

A partial solution to the problem was obtained through the use of a unique electronic capacitor circuit that effectively multiplies

the value of a 100 ufd dc input capacitor to a value of about 3,000 micro-farads. This This multiplication factor instantaneously takes place whenever a noise impulse presents itself across the dc power line. This approach solved the "low-frequency-rumble" noise.

To eliminate the higher frequency conducted noise a special nickle alloy/iron powder core toroidal filter was made a part of the dc power cable assembly. Instead of mounting the coil inside the transceiver where its stray leakage might re-introduce noise fields, the toroid coil was mounted externally from the unit enclosure.

OTHER PROBLEMS—MORE SOLUTIONS

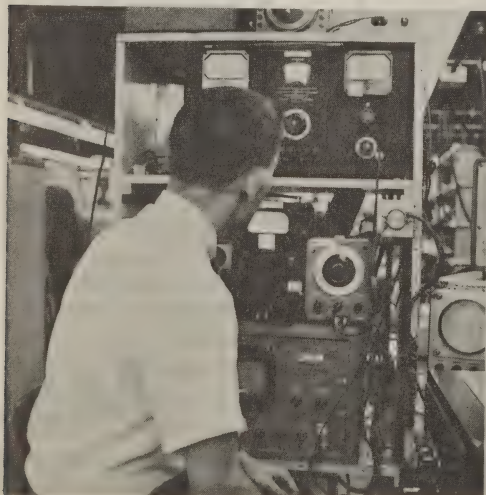
Another major feature incorporated in the CB-5 and continued in the Mark II, it was stated, is the utilization of "instant-heater" tubes in the transmitter's rf section. The problem, basically, is that transistors have inherent design problems that seem to limit their maximum modulation capabilities to not more than 85 percent modulation. 100 percent modulation was apparently not possible with transistors. It was decided that by employing these quick-heat tubes (they reach full operating ability in 300 milliseconds!), the hybrid design set would approach the quick-starting advantages of the all transistor unit and still have the 100 percent modulation punch-ability of a tube set. This approach is identical to that now used in much higher priced two-way VHF communications equipment.

Eight tuned circuits are employed in the receiver I.F. resulting in —45 db of adjacent channel rejection for unwanted signals on the band. Six of the I.F. tuned circuits are at 455 kc and two are at 1650 kc. Three tuned circuits at signal frequency provide image rejection of —50 db in the double conversion transceiver.

The engineering of the Mark II also resulted in an improved automatic noise limiter using silicon series diodes and a clipping diode added in the squelch circuitry improves the squelch in the noise immunity department.

IN THE PLANT

Aside from the preview of the CB-5 Mark II, which was the highlight of our





visit, we noted a number of interesting activities within the large plant.

The work on military contracts within the confines of the building brings about a considerable number of security restrictions that you don't normally run into when visiting CB plants. It takes at least an act of Congress (or a Presidential Order) to get a camera by the reception desk.

We were also impressed by the Hallicrafters concern for field testing. The CB-5 Mark II, for example, along with other Hallicrafters units is currently undergoing a long, arduous series of tests under the guidance of a major automobile manufacturer. Although we didn't see the tests underway by the auto manufacturer, we did witness a number of extreme tests within the plant. A live equipment demonstration was made using a pair of Mark II's, one operating as a battery operated portable installed in the new HA-14 portable case, and a second unit installed in a Ford "T" Bird which incidentally by virtue of the small size of the CB-5 Mark II makes a very attractive installation in an otherwise problem vehicle; environmental testing in special oven-heat chambers; icebox-refrigeration chambers; and strenuous vibration tests.

Chances are you will never yourself be treated to the kind of behind-the-scenes tour of the Hallicrafters' plant that we enjoyed. But through the eyes and ears of the CBH reporter, we have attempted to give you the next best thing — a birds eye view of a giant in the industry and the latest in new products.

Gigantic Give-Away WINNERS



Mr. John Artesani (right) is shown here presenting the beautiful POLY-COM SR-23 to the lucky winner of the CB Horizons Dream Transceiver Give-Away. Mr. Ralph Pitts, a travelling salesman, received the versatile 23 channel (T&R) unit by Polytronics Lab at a CB jamboree held at Myrtle Beach, South Carolina. Our thanks to Polytronics for furnishing this unit for our big CB Give-Away.

SECOND PRIZE

ECI Portalab. This multi-function test unit, donated by ECI was awarded to Harry Paboojian, KB14088, of Mt. Kisco, New York.

THIRD PRIZE

Hy-Gain CLR Mark II. This popular vertical provided by the Hy-Gain Company was won by Ira Roberts, Jr., KDD4576, Lancaster, S.C.

FOURTH PRIZE

Antenna Specialists M-103. This rugged mobile antenna donated by the Antenna Specialists Company now belongs to Herbert Seibert KED0729 of New Braunfels, Texas.

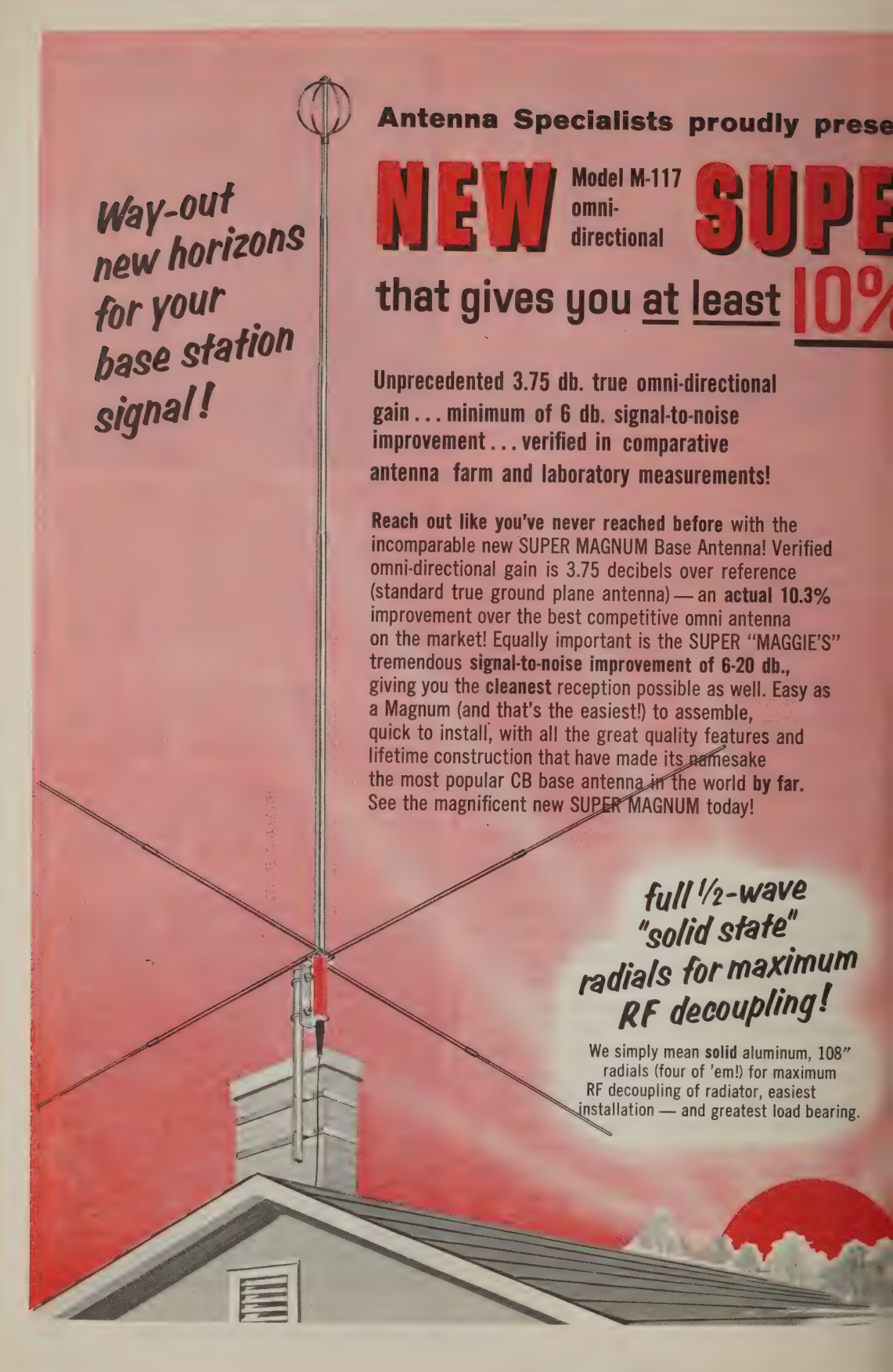
FIFTH PRIZE

S-Meter from Communications Electronics, Inc. This valuable instrument graces the CB shack of Ivian Hamilton, KHA-4219, of Milwaukee, Wisconsin.

SIXTH PRIZE

Hy-Gain "Omni-Topper." This extremely compact top-loaded mobile antenna was won by M. M. Brown, KFF0214, of Portland, Oregon.

Watch the next issue of CB Horizons for announcement of September and October Give-Away Winners.



*Way-out
new horizons
for your
base station
signal!*

Antenna Specialists proudly present

NEW Model M-117
omni-
directional **SUPER**

that gives you at least **10%**

Unprecedented 3.75 db. true omni-directional gain... minimum of 6 db. signal-to-noise improvement... verified in comparative antenna farm and laboratory measurements!

Reach out like you've never reached before with the incomparable new SUPER MAGNUM Base Antenna! Verified omni-directional gain is 3.75 decibels over reference (standard true ground plane antenna) — an **actual 10.3%** improvement over the best competitive omni antenna on the market! Equally important is the SUPER "MAGGIE'S" tremendous **signal-to-noise improvement of 6-20 db.**, giving you the **cleanest** reception possible as well. Easy as a Magnum (and that's the easiest!) to assemble, quick to install, with all the great quality features and lifetime construction that have made its namesake the most popular CB base antenna in the world by far. See the magnificent new SUPER MAGNUM today!

*full 1/2-wave
"solid state"
radials for maximum
RF decoupling!*

We simply mean solid aluminum, 108" radials (four of 'em!) for maximum RF decoupling of radiator, easiest installation — and greatest load bearing.

MAGNUM

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than any other
omni-directional
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*new "stati-lite"
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Drastically reduces receiver noise by continuous dissipation of static discharge. Exclusive orbital design — no pointed ends to create sparking.



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transformer!*

Super-heavy coil permanently encased in water-proof, rugged plastic housing. Forward power measurement: full five watts. VSWR: a fabulous 1.17 — best by far! Heavier mounting hardware takes masts up to 1½"!



*far more
rugged
construction!*

Over twice the contact area at telescope joints (no swaging!) — far stronger. Heavier-gauge seamless tubing than any other brand. Screws on both sides for firm electrical connection.



See your DB dealer (oops! we mean **CB!**)
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TURN YOUR MAGNUM
INTO A **SUPER MAGNUM**
IN 15 MINUTES —
GET 3.75 TRUE DB. GAIN!



Complete conversion kit
contains four 108" radi-
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ducer and all hardware.

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CB IN THE WORLD

(PART ONE)

CB In The World Today - Part One

Back in September, 1958, the United States government pioneered a new and novel form of experiment in radio communications; A radio service that any citizen, 18 years of age or older, could utilize for his personal activities, his business or his pleasure.

Class D CB Radio was born.

And, much like another novel experiment, this one in democracy dating back nearly 200 years ago, the world watched with more than casual interest.

Few need to be told that CB radio has in five short years become a screaming—howling success. At least as far as the man in the street, John Q. Citizen is concerned.

It is little wonder then that other nations in this world of ours have sought to copy our success with a radio service of their own, similar in many ways to the Class D service here in the states.

It is also no wonder that many of the industrial-electronic giants of this nation, mentioning no names here, have perhaps put a bit of pressure on Central and South American governments to establish a "Communications Personales" in their own countries. For from the manufacturers viewpoint, what is better than one huge market for two-way radios?

Why two huge markets for two-way radios, of course.

It is a equally documented matter of record that dozens of latin-American nations have profited from Uncle Sams over-abundance of communications equipment. Literally hundreds of tons of two-way communications equipment, dumped onto

the surplus market annually, heads due south like the perennial wild goose and straight into the hands of South and Central American firms who realize huge profits by unloading what Uncle Sam doesn't want on communications-starved southern nations in this hemisphere.

One year ago one of the major manufacturers of CB radio gear opened up a plant in Argentina. The better to serve the Latins with, we suspect.

So with pressure from U.S. industrial giants, through Washington lobbies; pressure from local radio magnates in their home territory and word of CB radio's success in America weighing heavy on their fevered brows, many Latin American countries have submitted to the establishment of a radio service patterned after our Class D band.

Horizons has been exploring this growing market for many months, for purely pecuniary reasons, and we thought that you would be interested in how some of our Latin neighbors interpret Part 19, since they apparently feel what is good enough for Uncle must also be good enough for them.

BAHAMAS

The Bahamian Islands, under British control for the most part, but occupied by a vast contingent of U.S. citizens thanks to the missile down-range tracking program, has a unique 27 megacycle service.

23 channels (the same as ours) are offered. Five (5) watts is the power limit. The government type-approves all sets sold in the islands, assuming you didn't bring yours into port in your duffle bag along with your 35mm camera and stock of cognac.



finest CB . . . all three

TWR-4 Here's the newest thing in 2-way CB radio — the Raytheon Ray-Tel TWR-4 offering full range AVC, automatic tuning, noise-free standby, frequency trim tabs and dual conversion superheterodyne receiver for maximum coverage, selectivity and sensitivity. **Plus** "S" meter and six channel operation. The TWR-4 is in a class by itself combining outstanding, dependable performance and the convenience of extra features at a most convenient price. \$179.95* **TWR-3** The Ray-Tel TWR-3 at \$219.95* adds such exciting features as: 10 channel operation, tunable receiver, 3.2 watts output, "S" meter — and the revolutionary solid state synthesizer which cuts crystal costs in half! **TWR-2** At \$159.95* you can't buy finer 2-way CB communications than Raytheon Ray-Tel! The Ray-Tel TWR-2 offers full range AVC, automatic tuning, noise-free standby, frequency trim tabs and dual-conversion superhet receiver for maximum coverage, selectivity and sensitivity.

Please write Raytheon Company, Distributor Products, 55 Chapel Street, Newton, Massachusetts for catalog SP8025, describing Raytheon's complete CB communication products — antennas, noise suppression kits, crystals, demo-kit, antenna installation kit. *Suggested list price

RAYTHEON

There is no limit to antenna height, and palm trees throughout the islands are sprouting Magnums and CLR's. You can use the radio service for personal, business or government purposes according to a gentleman we interviewed in the Tele-Communications Department.

As of mid-September, the Telecommunications people had approved 132 licenses at a fee that varies from \$2.80 for a fixed station to \$7.00 for a mobile station. Most stations are "fixed" according to the records!

Oh yes, they don't issue you any call-letters. Apparently you can make up your own, as many stateside CB'ers connected with missile tracking work have done. Thus the strange "VGH" prefix some stateside listeners report to CBH.

BERMUDA

The isle of Bermuda, determined to remain British in every respect, thus far has turned thumbs down on all attempts to launch a 27 megacycle radio service there. So leave your transceiver home when you vacation here this winter. Chances are that when the British government approves a 27 megacycle service in Great Britain (they are testing such a service in the north of Great Britain currently), Bermuda will go along too.

NETHERLANDS ANTILLES

This little island group, off the coast of South America near Venezuela is ripe for CB exploitation. The people and government here are very hep on tourists, have recently relaxed their regulations governing amateur radio so that U.S. hams can vacation and operate from here, and probably won't be long to fall in line if someone takes the time to get them interested.

Their Director of Government Radio and Telegraph Administration told CBH he would like to learn more about "this CB service" and we naturally obliged him with a boat load of data.

BARBADOS

Barbados, not to be outdone by its Bahamian neighbors, will open a 27 megacycle service by the end of this year. The proposal calls for a service very similar to the Bahamian extraction of CB in the states.

REPUBLIC OF PANAMA

Long a country dominated by U.S. policies effected because of the canal there, but equally long violently opposed to American intervention in their affairs, the Republic of Panama has a CB service at present. They give you 27 possible channels 10 kcs apart beginning at 26.965 and ending up at 27.255 megacycles. The government approves of transceivers sold for their service and they assign you one frequency to operate on. You are limited to 5 watts of power, but may go up 30 feet with your antenna. They charge you \$5.00 for your license.

Here are the 9 license holders as of September 13. All are base only, with the exemption of the last one which also runs mobile units.

Freq.	Licensee
26.965	Ricardo Cucalon, Carrasquilla 170, Panama
26.975	Hotel Continental, Via Espana y Ricardo Arias
26.985	Felipe Motta, Jr., Ave Balboa
27.035	Productor Arcilla, La Loceria, Ave. M, Espinosa
27.055	Colegio Javier, Calle 4a. Perejil 7-100
27.075	Foto McClean, Calle 25 Oeste 8-104 cto 16 altos
27.085	Westrex Caribbean, Ave. Cuba 32-14
27.115	Importadores Dorado, S.A., Via Espana 45
27.145	Oscar Lopez F., Calle 31 y Ave. Peru 5-83

ELSEWHERE

As information becomes available, and we are able to verify its validity here at CB Horizons, we will present future reports. It is interesting to note that the governments of Germany, Portugal and Austria authorized 27 megacycle radio service of a plane equivalent to the Class D service here in the states as much as two years ago. In Great Britain, a considerable amount of pressure working up to the government from the masses has forced the GPO there to authorize a six month trial test of 27 megacycle personal radio in the north lands of Great Britain. This is by far the least densely populated region in the isles, and as one GPO spokesman reportedly put it "those blimey idiots can talk all they want to up there and we won't have to listen to them down here." But the fact remains that six months after the tests begin, the GPO will be forced to consider the permanent establishment of a 27 megacycle service in Great Britain.

And won't that be a bloody mess!

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88 FEET MAXIMUM
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"412" Webster band-spanner.

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Starts off with ...

5 crystal controlled channels for Business use ...

Adds a big plus ...

Instant channel change from the front panel merely by plugging in proper quartz crystals ...

Adds another plus ...

Pre-wired for selective tone calling ... just plug standard tone unit in rear receptacle provided.

Includes ...

- A hot 0.2 uv dual conversion superhet.
- Wide level AVC control, ± 6 db, 5-100K uv.
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- Audio output, 3.5 watts.
- Very high image rejection—90 db or more.
- Spurious response better than 60 db.
- 8 tubes, 2-dual purpose, plus rectifier.
- Full 5W max. input to PA—power output of 2.7W—modulation to 95%.
- Panel instrument gives relative "S" readings—power output, modulation.



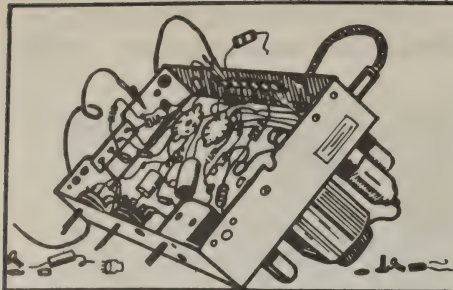
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South San Francisco, Calif.

Please send information on "412" and full line catalog.

Name

Number Street

City Zone State

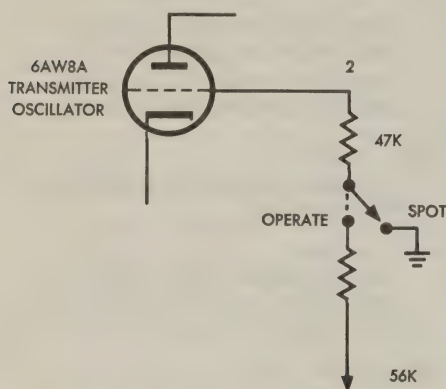


TECH TIPS

FOR CB'ers

CRYSTAL SPOTTING FOR HE-20, ETC.

Here is a simple means of obtaining an extra function for your HE-20 (Lafayette), Mark VII (RCA) and others using a similar circuit.



As the diagram shows, we have merely added a DPST switch in the grid circuit of the 6AW8A transmitter oscillator.

With the switch in the 'SPOT' position the 6AW8A oscillates. With it in the normal position the oscillator stays quiet until you push the push-to-talk mike button.

A crystal spotter is helpful when you want to find the receiving position on a tunable receiver to correspond with one of your transmit crystals. Simply place your transmitter crystal selector switch in the position where the crystal for the channel you want to spot is located and throw on the spot switch. With the oscillator on, tune your tunable until you hear your oscillator's carrier. Return to normal operation with the spot switch and you are ready to talk and listen on the same channel without any unnecessary roaming around on an inaccurately calibrated dial.

Dave Hacken, 2A4510

NOISE CLIPPING CIRCUIT

On the Noise Band (as I like to term 11 meters), I have heard many ideas on cutting the noise level and receiving better signals.

Here is a quick clipper idea that you might find helpful. This is no Makino Limiter by any means, but it can be effective, especially when you have a very high local noise level.

On sets using 12AX7-12AU7-12AH7 dual purpose audio and/or speech amplifier tubes which have the modulation tube and audio transformer circuit, bypass the plate of the tube to ground with a .001 to .005 MF capacitor. Try different values for best receiving quality and check the bass tone while transmitting.

Another brief note, this about the tubes used as the final power amplifier in most sets. Because we are working at such low power levels, ie. 5 watts or under, many transceivers use receiving type tubes in the RF transmitter stage or stages. Many of these tubes die slowly and with no warning that they are deteriorating. This is especially true with the less expensive sets or older transceivers. For peak performance the tubes should be checked on a good mutual conductance tube checker and the transmitter checked often for output. Keep a simple chart of the transmitter's output when the tube was new. When it drops more than 20%, it is time to replace the tube with a new one. If possible, obtain a 'ruggedized tube' for the replacement. Most tubes have a ruggedized equivalent (version) now. The ruggedized tubes have longer life and are able to operate at higher output than the originals most factories stock with the transceivers.

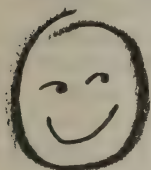
William A. Sandy, 2A3590

**9 1/2
out of 10
CB'ers**

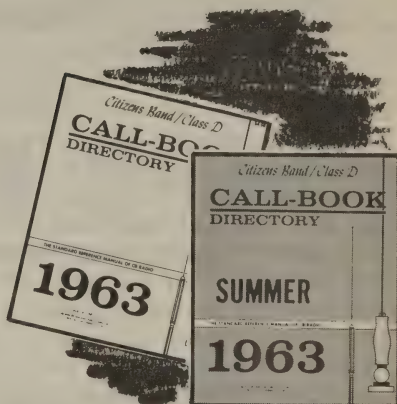


need a CB Call-Book

Whether you use CB for business or pleasure, you'll find the Call-Books extremely useful. For travel, search and rescue work, or routine communications its a great convenience to be able to identify other stations and obtain names and addresses from your own CB Call-Book. Get the 1963 editions now — while they last!



**turn to page 12 now
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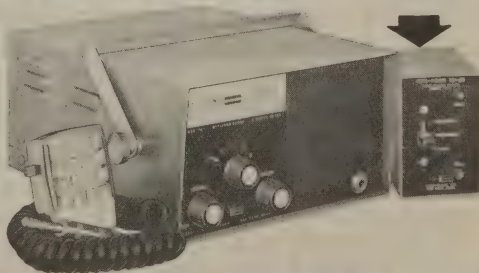
STATE

TG-1

"TONE GUARD SYSTEM"

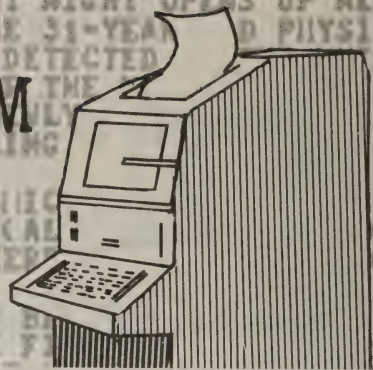
- ENCODER—DECODER
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- SUPERIOR NOISE IMMUNITY
- PATENTED DISCRIMINATOR
- SIZE 4 1/2 x 3 3/4 x 2 1/2

**C.B.
NET PRICE
\$44.95**



CB NEWS FROM WASHINGTON

R. N. Adams, CBH Man in Washington



AWARENESS OF FCC GROWING

The current interest in what the FCC does, and how it does it, as a result of the present proposal (Docket 14843) to substantially modify Part 19 provisions, is showing up across the nation. CB'ers are taking their FCC liaison with increasing seriousness and a number of CB'ers who 'overlooked violators in the past' are learning that as long as flagrant violations continue the usefulness of the entire service is jeopardized.

One CB'er on the west coast sends along a clipping from the Long Beach (California) Press Telegram which would be funny if it weren't so tragic.

It goes like this: Under a banner headline of "Citizens Band Radio Operator Arrested for Obscenities on Air", the story reads (in part) "The 'Spider', who allegedly broadcast obscene remarks from his car radio while parked atop the Palos Verdes hills, was trapped in a web of his own making.

The radio operator (age 42 no less!) was arraigned before U.S. Commissioner Theodore Hocke on a complaint charging violation of the 'obscene broadcasting' section of the U.S. Code.

The defendant, a skilled laborer, was arrested by FBI agents who said he used 'vile and obscene language' over Citizens Band channel 6 on November 11, 1962.

According to the FBI, the Spider opened his dawn car-radio

broadcasts last autumn. He started each broadcast saying 'This is the Spider Speaking'.

Soon, the Federal Communications Commission at Santa Ana received complaints that 'the Spider' was annoying others on the Citizens Band frequency.

William J. Hoffert, engineer-in-charge of the FCC Monitoring station, said the FCC began to triangulate on the broadcasts, using radio directional finders.

While Hoffert's men were trapping, others were taping, making tape recordings of the Spider's dawn messages, day by day.

The broadcaster, when caught, said he was intoxicated at the time. He noted 'I remember I decided to go up there near the radar tower 'cause I figured I could broadcast all over from there.'

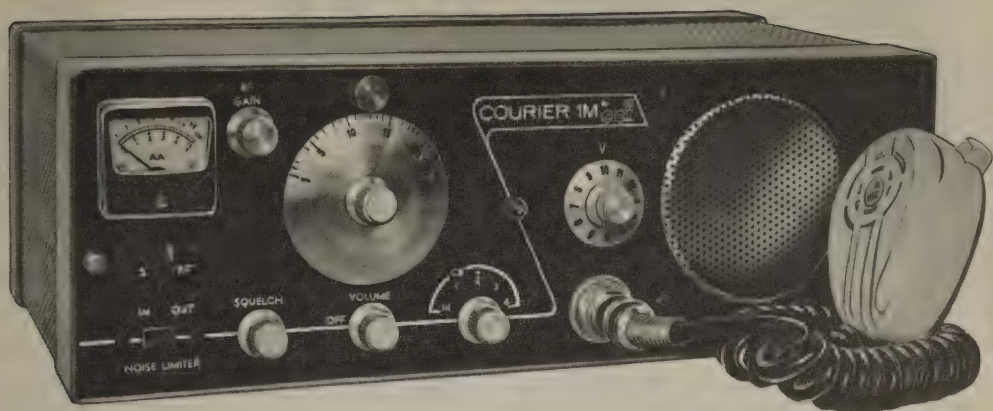
After the FCC had zeroed in on the Spider, the FCC obtained a complaint from the U.S. Attorney General's office.

The defendant, out on a \$250 bail, was asked if he still had his two-way radio in his 1959 Cadillac.

'My wife made me take it out' the Spider replied.

STRAYS





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QUIETEST

MOST POWERFUL

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HEAR IT TO BELIEVE IT!

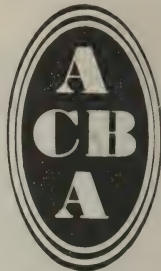
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AMERICAN CITIZENS BAND ASSOCIATION



The views expressed in this column are solely those of the ACBA and do not necessarily reflect the views of the publishers of CB Horizons.

INCORPORATED AND READY FOR ELECTIONS

The American Citizens Band Association now has (officially) an "Inc." tacked on after its name.

The Articles of Association and the By-Laws of operation are now available for distribution to the membership.

At the same time the incorporation was completed, and the Steering Committee Chairman Tommy Mellons was announcing that former CB Horizons Publisher Bob Cooper had been engaged as Executive Administrator for the Association, plans were being laid for the ACBA first nationwide election of a Board of Directors.

This is the first time than any CB organization has reached the point of conducting a nationwide polling of its members for the purpose of electing a governing body of CB'ers.

NOMINATIONS NOW OPEN

With 10,000 Charter Members virtually assured by the end of this month, the Trustees of the Association, acting under authority vested in them by the By-Laws, are calling for nominations to the Board of Directors. It is advised that all members request a copy of the now adopted By-Laws and Articles of Association so that the proper nominating procedure is followed. Copies of both are available in a package by sending a stamped — self-addressed envelope (with 15 cents in postage — this is heavy!) and 50 cents in coin to cover the cost of printing to the ACBA, Inc., P.O.

Box 405, Oklahoma City 1, Oklahoma. Nominations will be open until the 15th of December, so get your nominees lined up and your nominating petitions in motion. One Board Member will be elected from each of the 20 primary CB Call Districts (the 7th and 22nd, 4th and 24th, 11th and 21st and 14th and 23rd are lumped together for Board District purposes), and a proper nomination must have the written signatures of 25 full members of the association (with their membership numbers) to be eligible. Write for your copy of the By-Laws now to get your copy squared away for nominating.

MEMBERSHIP DRIVE

The trustees have decided that the Booster Drive shall continue, even though the 10,000 membership mark is near. New members will continue to be able to earn Booster Membership pins by signing up five new members. Complete information is in your membership packets.

ACBA APPOINTS

FCC WATCHDOG COMMITTEE

The ACBA Steering Committee has appointed well-known Virginia State CB'er Bob Langlotz, KCJ2290, of Barboursville, Virginia to head up an FCC 'Watchdog Committee' for the interim period beginning September 1, 1963 until a permanent FCC Liason Committee is chosen.

Langlotz, one of the most active CB'ers in the nation in the field of legislative and judicial affairs, brings a wealth of knowledge of FCC happenings and affairs to the post of Committee Chairman.

He has spearheaded actions of the Virginia State Citizens Band group to obtain

equal hearing time before the Commission since the Part 19 proposal broke. Bob Langlotz is personally acquainted with the FCC small fines and forfeiture people, Division Head Ivan Loucks and a wealth of other decision makers at the Commission.

It was Langlotz, with Virginia State CB Association President Jesse Jackson, who cornered former FCC Chairman Newton Minow on the question of Citizens Band, as reported in the July issue of CBH.

The FCC was on vacation during the month of August, but Langlotz reports his Committee will begin work with the month of September to keep ACBA members and all CB'ers informed of progress on Part 19, and Commission affairs in general, effective with the first of September.

Regular reports from this very important ACBA Committee will appear here in the ACBA News.

LEGAL NEWS LETTER

Under the guidance of Bob Cooper, the ACBA will soon be offering a Legal News Letter service to members. The Legal News Letter will work this way. Each member will file a stamped (5 cent stamp sufficient) self-addressed envelope with the Association. Mark on the upper left hand corner of the envelope News Letter and your membership number. When a Legal news item becomes available, a bulletin will be prepared and mailed to all members with envelopes on file advising them of the details of the item. This will include the soon-expected changes in Part 19. When you receive one Legal Newsletter, you will know it is time to file a new self-addressed stamped envelope with the association.

THINGS FOR ACBA MEMBERS TO DO THIS MONTH

- (1) Write for your copy of the By-Laws and Articles of Association.
- (2) Start your nominations petition for the nomination of your candidate to the ACBA Board of Directors. Deadline for filing nominations is December 15th: See the By-Laws for complete details.
- (3) File your stamped, self-addressed envelope for your Legal Newsletter service.

Claude Horne
Trustee
A.C.B.A.

INCREASE RANGE AND QUALITY

with specifically engineered

Master Mobile



"CB" Antennas

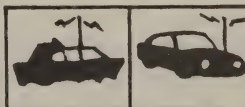
Giant Q-11
BASE STATION
CUBICAL QUAD

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Tailor made to increase range in limited CB band. Tough, lightweight components permit use with most TV-type rotors. Easily assembled on ground or tower.

SPECS: Forward Gain; 8 db; Front to Back, up to 40 db; Feed Type, 52 ohm coax; Polarization, horizontal or vertical; Longest Element, 9'8"; Boom Length, 65 1/2".

GET ON THE BEAM



CG-275 Retractable Gutter Mount with positive lock

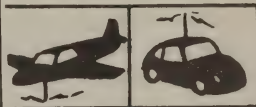


MM-M-75 Adjustable for curved surface mounting

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Top Loaded Fiberglass

SPECS: 52 ohms, 60 watts maximum power, RG-58 or equivalent, SWR-1.1 to 1 at resonant frequency. Complete with either mount.

48" Antenna with mount of your choice

AIR SENTRY "Shorty"

Model CB-1
\$10.95 NET

Complete with mount as shown

Designed for car installation to cover all 23 channels. Top loaded fiberglass complete with shock spring, mount and 12' coax cable. Whip, 18" — overall, 23" — terminates in coax plug PL-259.

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THE CB LISTENER



Awards and Certificates for CB DX



XB3CB WRITES THE LISTENER

A report this month from 27 megacycle devotee XB3CB located in Guadalajara, Jalisco, Mexico.

Rafael L. Corcuera, who got into CB because he is the exclusive Johnson (Marine) distributor for the state of Jalisco, Mexico, reports he read the report on Mexican 27 megacycle activity in the September issue of CB Horizons.

Rafael notes he has received over 300 CB QSL cards from CB stations all over the United States, Canada, Puerto Rico and Venezuela. He operates with three CB radios, one in his office, one in his automobile and one at home.

He uses Lafayette CB gear, the HE-20 and the HE-23 units and he has had mobile contacts with stations throughout the Caribbean from his car (remember most central American countries don't prohibit working skip). Rafael is also a licensed amateur radio operator and uses Globe ham equipment. He notes "I find CB much more satisfying because with the 3.5 watts output the conditions must be much more perfect for communications."

Rafael asks that we invite any CB radio enthusiasts visiting in Mexico to stop and see him. His complete address is Rafael L. Corcuera, Prisciliano Sanchez No. 416, Guadalajara, Jalisco, Mexico.

How about a photo of your station Rafael?
THOSE VENEZUELA STATIONS

J. H. Prine, M.D. (KEA2877) of Citronelle, Alabama reports he has been hearing stations from 1500 CST to sometime later in the day which he identifies as Venezuela. Doc Prine notes he heard on station with

numbers ending in 1627 calling a station in Delaware (a female voice in Venezuela) on one occasion.

His big search is for the name and addresses of the Venezuela stations!

Naturally catching sufficient address to get a heard report card from any Spanish speaking station can be a problem. If you stick your neck out and call the station, to engage him (or her) in conversation sufficient to obtain his address, you are clearly violating the law and will be cited if heard by the FCC. On the other hand the temptation is great for Venezuelan CB QSL cards are rare!

The best advice we can give you personally is to suggest that you let **someone else** do the engaging in conversation while you sit back and listen hoping that the central of South American station will pass along his name and address over the air to the **other party**.

There is no present means of obtaining these out-of-country CB'ers names and addresses for the purpose of listing them in the semi-annual CB Call-Books.

However many of our readers do individually have an address or two tucked away in their files on a few of these operators. May we suggest that if you have an out-of-country card from any 27 megacycle station (from Canada south to Chile) that you send the name, call and address of the station along to this desk? If we get sufficient reaction, we will list all of these calls, names and addresses in the next available edition of the CB Call-Book, and credit YOU in the Call-Book as supplying the information. **Fair enough?**

BLANKET INTERCEPT FORM

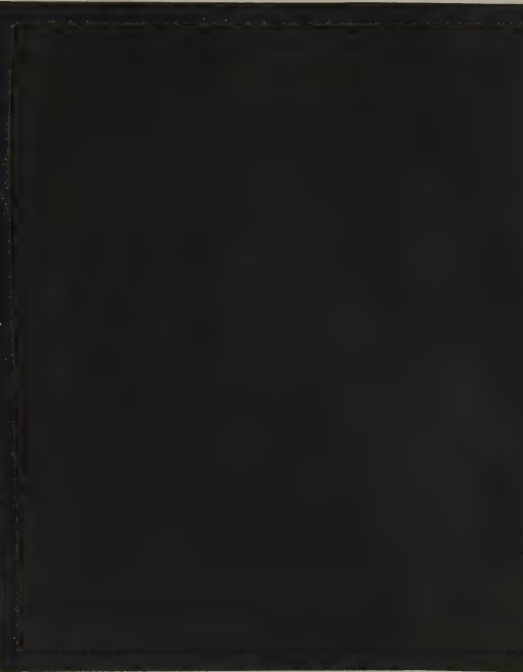
For the benefit of the many new CB'ers this month, we are again running our 'Blanket Intercept Form,' which we urge you to fill out (have a few CB Listener buddies fill it out too) and return to this desk.

The purpose of the form is two-fold. First of all, by filling it in and returning it to The CB Listener, you immediately are listed in this column, as a station which waives your desire to keep your communications private, as provided for under section 605 of the Communications Act. This means CB'ers intercepting your signal can feel free to report their interception to you, without fear of reprisal from the FCC.

Secondly, by filing this form and being listed in CB Horizons, you let other CB'ers who may need a card from your state toward the HAS award know that you are an enthusiast and ready and willing to make a listening test.

So send in your form today. It's the half-page form with this column. Simply cut it out or type out a duplicate if you aren't too crazy about tearing your magazine up.

Here are the new stations who have filed Blanket Intercept Forms with The CB Listener in the past few weeks. Add these late comers to the list appearing in the September CB Horizons.



a major break through
"...a superior mobile antenna."
universal mount now ready
\$5.95
—CB Horizons, Oct., 1963



According to CB Horizons ("Lab Reports," Oct., 1963) the new Toroid-Tenna is not only "... a superior mobile antenna in many ways." —but also "... precision engineered and very nicely manufactured ..."

It is no coincidence that the CBH staff noted outstanding quality and performance characteristics in this antenna. The Toroid-Tenna was developed by Electro-Winders Co., Inc., out of the experience gained through years of exacting missile and satellite antenna projects. The toroid transformer in the chrome-plated base of the Toroid-Tenna provides simple screwdriver adjustment for **perfect match!** And the 42-inch Toroid-Tenna has the lowest noise pickup — from extraneous sources — that we have ever measured!

\$21.95

You owe yourself this extra measure of mobile coverage. Order your Toroid-Tenna today and learn the amazing truth for yourself.



This Symbol (for the Toroid Transformer) represents the first honest to goodness range improvement in CB mobile coverage.

ELECTRO-WINDERS CO., INC.

PR Antenna Systems Division
854 West Front St., Covina, California

Enclosed is my check (money order) for \$21.95 for a Toroid-Tenna. (In California, add 4% sales tax.)

Name _____

Address _____

City & State _____

SOME DISTRIBUTOR TERRITORIES OPEN.

BLANKET INTERCEPT PERMISSION

The undersigned persons (and stations) hereby grant blanket permission to all Readers of the **CB Listener** column in *CB Horizons* magazine to intercept transmissions from my (our) station(s) and to report

KG11082—Syracuse
KG12749—Emporia
KG12965—Emporia
KGH2989—Emporia
KG12376—Emporia
KG11871—Emporia
17W6055—Emporia
KGH0109—Emporia
KGH4460—Emporia

WISCONSIN
KHC5537—McFarland

ILLINOIS
KHC5335—E. Moline
18QA0200—Chicago

INDIANA
KHC5807—Pennville
MICHIGAN
KH12016—Grand Haven
KHH0388—Flint
KHH3428—Flint
KHG0567—Flint
KHH4392—Flint
KHG7555—Flint
KHG8873—Flint
KH12348—Flint
KH17498—Flint
KHG5322—Flint
KH14241—Flint
KH11419—Flint

MAKINO - FEEDBACK

In *Makino-Revisited*, September, 1963 an important line was left out of the copy. In the fourth paragraph, right hand column, page 23, the first sentence reads "Now, connect the free end of R-5 to ground." A second sentence was omitted, and it should be added as follows:

"At the same time, before soldering, remove R-6 from this terminal and connect it to the ungrounded end of C-4."

As reader Val J. Golding, KFC3808, San Francisco, California points out "The failure to move R-6 will result in extremely low audio and will also cause negative S-meter readings, just as if the diode had been reversed."

Reader Golding goes on to report "A Lafayette with the Makino modification is the quietest transceiver I have ever seen, bar none. About 50% of the hundreds in use in the Bay Area have been converted to Makino, per the *CB Horizons* reports on this subject.

"Your article failed to mention the Lafayette HE-90 and Knight-Kit KN-2500, which are electronically identical, from antenna to speaker. These sets can also be 'Makino-Converted' following the instructions for the HE-20 series. However one change between these sets and the HE-20 instructions must be noted. The HE-90 and KN-2500 use a different section of the 6T8 in the ANL/detector circuit. Thus every time pin 1 appears in the instructions, substitute pin 6 in actuality.

"I have personally converted a large number of sets in this area and therefore am looked upon as some of 'Makino Wizard.'"

FOR CITIZENS BAND

Hy-Gain's GOT IT!

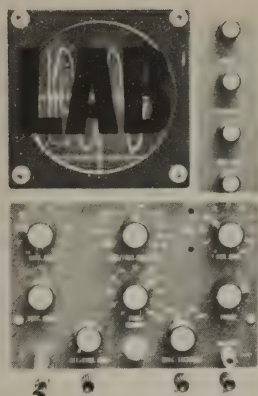
Hy-Gain's BASE STATION AND MOBILE ANTENNAS FOR CITIZENS BAND

If you're working Citizens Band... if you're looking for optimum performance from your antenna system...if you're looking for an antenna to fit a particular space requirement or a special purpose Hy-Gain's GOT IT! They're all pictured and fully described in Hy-Gain's exciting 16-page catalog...the fabulous CLR II...famous "Topper" mobile whips...Beams that deliver 8 to 10 times power increase...a unique solid-state CB-AM coupler...the world's first lifetime Lightning Arrester...the fantastic Co-Phaser...and, many, many more. Get your free copy of Hy-Gain's Citizens Band Antenna Catalog today...see the line with a record of "firsts." At your favorite Hy-Gain Distributors or write:

HY-GAIN ANTENNA PRODUCTS CORP.
N.E. Highway 6, Lincoln, Nebraska

REPORTS

OF PRODUCTS TESTED
BY OUR ENGINEERS



WEBSTER 412 TRANSCEIVER

Subject for careful evaluation this month is the Webster Manufacturing Company (317 Roebling Road, South San Francisco, California) Model 412 transceiver.

The 412 is a six channel crystal controlled transceiver that includes a number of interesting and ruggedized design features for all CB'ers.

A six channel crystal controlled set might normally be somewhat limiting to the operator who wishes flexible coverage on more than 26% of the total channels allotted to CB. The Webster people have partially removed this as a potential problem to the buyer by adding external front-panel transmit and receive crystal sockets for the sixth channel. This allows the operator to carry a pocketful of spare transmit and receive crystals for those situations when he has to go off on his regularly used five channels and

onto a seldom used channel.

The 412 operates from both 117 vac and 12 vdc, and features a handsome S meters

The unit's innards look as though they will seldom need to be touched. Extra care in such features as tube holding clips, to keep the tubes in their sockets during rough use, indicates careful planning for the serious CB user who requires maximum reliability.

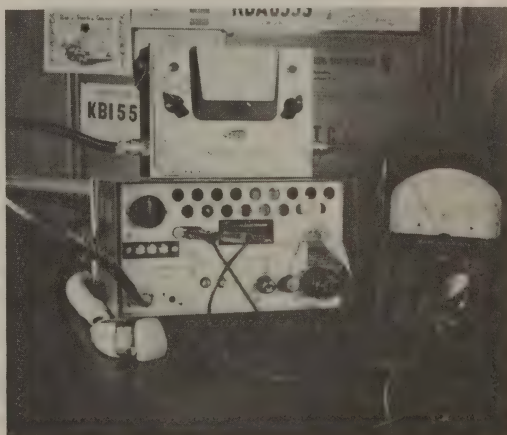
The 412 is flexible, too. A plug-in selective calling unit is available and provision for direct plug-in octal socket connection is included in the octal female socket on the rear apron of the set.

A terminal strip on the back apron has three screw down connections. One is for external grounding of the transceiver, the other pair for an external speaker connection.

The receiver is quiet, and Webster has



WEBSTER 412 TRANSCEIVER



Rear apron makes complete set installation adjustment, including final amplifier loading for 5.0 watts input as shown here, a very simple matter.

provided for additional operator control by adding an on-off switch to the noise limiter at the far-off position on the squelch control pot. This gives the operator **no noise limiting** for those rare occasions when signals are very weak, noise is very low and you would normally have the squelch cranked wide open trying to copy the message.

In our lab tests we appreciated an external set of plugs on the back apron which allows the technician to measure the plate current to the final amplifier tube in the transmitter. Two neat pot controls also protruding through the rear apron allow the installer to load the transmitter's pi-network output stage, and then dip the final plate current for maximum output. We found the dip coincided right on the button with the maximum output, as measured on a wattmeter, and that at loaded inputs (into a dummy load) varying from 3.0 watts to 8.65 watts the modulation remained clean and crisp, always upward and never under 90 percent or over 100 percent.

This speaks well for the 6CX8 final amplifier stage neutralization and the general

ability of the set to handle long-term use.

The transceiver comes with a rugged broadened-U shaped mount for fastening under your dash. Two large and easily grasped circular mounting screw-discs tighten up with ease.

The dark-grey cabinet is accented by a gun-metal blue front panel which in turn is highlighted by a two-tone orange and brown center stripe.

LAB STATISTICS — WEBSTER 412

Power input (adjusted)	5.0 watts
Power output (at 5 watts)	3.2 watts
Max. Power Input (dummy load)	8.670 watts
Power Output at Max. Input after 10 Minute Dummy Load Test	5.210 watts
Modulation Percent, Voice (5 Watts)	90-100 percent
Modulation Swing . . . (tone test)	
3 watts input—upward,	100 percent
4 watts input—upward,	100 percent
5 watts input—upward,	100 percent
6 watts input—upward,	100 percent
7 watts input—upward,	95 percent
8 watts input—upward,	90 percent
Receiver Sensitivity For 10 db signal plus noise to noise	0.4 uV
Receiver Selectivity . . . 6 kc off center of channel—6 db down.	
10 kc off center of channel—40 db down	

the *Amazing*

BUDDY TR-11 Citizen Band Transceiver



Custom Built by
MARINA

10 CHANNEL CRYSTAL CONTROLLED

Dependable Range: Flat terrain,
clear channel, mobile to mobile 12
miles. Base to mobile 20 miles with
base antenna 40 ft. above ground.

The finest Citizen Band Transceiver on the market, with no exception. If you don't agree after a ten day trial your money will be cheerfully refunded.

BUDDY TR-11 with one set of crystals, Turner 350 Mic., less power supply	\$179.50
12 Volt Transistor Power Supply with connecting cable (Specify Polarity)	55.00
115 Volt A/C Power Supply with connecting cable	35.00
Mobile Mounting Brackets	4.95
Set of Crystals (1 each Transmit & Receive) any CB Frequency	6.00

**AVAILABLE AT ALL OLSON ELECTRONIC STORES
OTHER DEALER INQUIRIES INVITED**

Please send me information on TR-11
MARINA COMMUNICATIONS, Inc.
2912 Industrial Way Santa Maria Public Airport
Santa Maria, California

NAME _____
ADDRESS _____
CITY _____ STATE _____

DATELINE - "CB INDUSTRY"

NEW PRODUCTS, SERVICES FOR 2-WAY RADIO

NEW TRANSCEIVER FROM LAFAYETTE

Lafayette Radio Electronics Corporation, 111 Jericho Turnpike, Syosset, L.I., New York has broken through the CB transceiver price barrier with a brand new 8 channel crystal controlled (23 channel tuneable) set that sells for just \$59.95!



The HB-115 features 8 crystal controlled channels operating at 5 watts input, full modulation, a pi-network output which matches antennas from 30 to 100 ohms; and, automatic volume control and variable noise limiter.

Also included is an external speaker jack (or earphone jack) on the front panel, and push-to-talk electronic switching.

The unit comes equipped for channel 15 operation ready to plug into 117 vac. A separate 6 or 12 vdc supply is available.

See it at your nearest Lafayette Associate store.

TRAM'S TR-70C

The folks at Tram Electronics, Box 187, Winnisquam, N.H. have announced their newest addition to their line of CB base and mobile units.

The TR-70C Mobile is a complete 23 channel unit designed to provide unrestricted use of the entire 23 CB channels. This version of the Tram 23 selects any of the 23 transmit channels with a turn of the channel switch.

The receiver is tunable over the entire band and there is a front panel socket provided for any one receive crystal for those who prefer their monitoring channel crystal controlled.

The new Mobile employs an audio-visual spotting system that allows you to spot on

MARINA COMMUNICATIONS MOVE

One of the oldest and most respected names in west-coast CB communications, Marina Communications, has moved to new and considerably larger quarters in Santa Maria, California.

Marina's fame spread far and wide when they introduced their Buddy Whips, Gizmotchy beams and a line of receivers, transmitters and transceivers.

The new trade name for Marina, the "Buddy Line" will bring forth the Buddy TX-11 transmitter, the Buddy RC-11 receiver and the Buddy TR-11 transceiver.

The move to Santa Maria, north up the coast of California, was made considerably more enjoyable by the help provided by the Santa Maria Developer's Association and the Chamber of Commerce, both of which welcomed the new electronics manufacturing plant to the city.

istics, by Senator Goldwater, raises the question of just how much the Senator really knows about CB.

One manufacturer registered his discontent with the Senator; "As to your claim regarding Citizens Band Radio wherein you imply possible clandestine use, I (also) challenge this claim as being incorrect. You are apparently not aware that Citizens Band licenses are limited to five watts of power and antenna heights to 20 feet.

station where a wall had given away. Not necessarily a communications drill, the group quickly installed rope retainer walls around the cave-in area to hold curiosity seekers back, and acted as a crowd control group warning on-lookers of the dangerous gasoline fumes present, and perils that existed.

Is the group unusual? We believe so. CONTAC provides Atlantans with a completely free-will volunteer core of hard working emergency trained personnel who apparently put the life and safety of fellow Atlantans above whatever personal inconveniences a pre-dawn sub-zero fire alarm or general emergency might bring.

CB'ers with an interest in this group are urged to contact CONTAC at P.O. Box 8236, Atlanta, Georgia.

STRAYS



from HLS*

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of

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GENTLEMEN, please ship Deluxe Binders as indicated below. Check or M.O. enclosed.

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- ☐ I'm enclosing \$3.95 each for CB Call-Book deluxe binders. Ship postpaid.
- ☐ Please ship postpaid Deluxe Binder Sets. \$6.95 is enclosed for each set.

CLIP THIS HANDY ORDER FORM — MAIL IT TODAY

WIN! FREE CB EQUIPMENT IN *General* RADIOTELEPHONE COMPANY'S MONTHLY DRAWING!

This month *General* is giving
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NO BOX TOPS! NO MONEY! NO CONTESTS!

DRAWING RULES: Enter by simply filling out the self-addressed post card below, and mail it to us before December 10th. The winner's name will be drawn, notified by mail, and announced on the inside front cover in General's February ad.

Drawing void in any locality or State where prohibited by law. Federal, State and Local Government regulations apply.

Prize winner will be selected in a random drawing conducted by Stanley R. Rader, Certified Public Accountant. Its decision, with respect to all phases of the drawing, will be final.

Entries limited to residents 18 years of age and older, of the United States and Puerto Rico. Employees and their families, of General Radiotelephone, General Dealers, Stanley R. Rader, Certified Public Accountant, and General Radiotelephone Company's Advertising Agency are not eligible.



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GENERAL RADIOTELEPHONE COMPANY
3501 West Burbank Boulevard
Burbank, California

- ☐ Please rush FREE the General 1963 Catalog.
☐ Enter my card in the CB Drawing!

NAME _____

CB CALL _____

ADDRESS _____

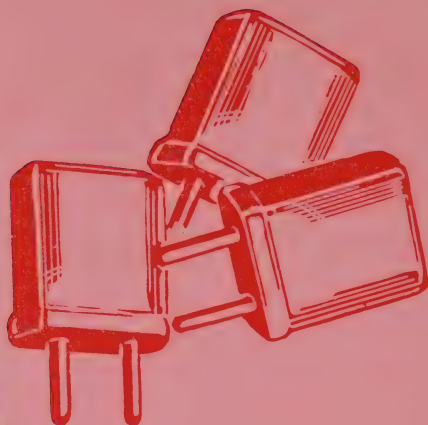
CITY _____ STATE _____

NAME OF YOUR
LOCAL CB DEALER _____

DEALER'S ADDRESS _____

CITY _____ STATE _____

NOW!



.003% tolerance crystals at
no increase in price. One year warranty.
All channels in stock for most makes of
C.B. units. Net \$2.95 each.

See your General Dealer or write General
Radiotelephone. State make and model.

PLACE
4c STAMP
HERE

GENERAL RADIOTELEPHONE COMPANY

3501 W. BURBANK BLVD., BURBANK, CALIFORNIA

CITIZENS COMMUNICATIONS

Reports



FIRST DISTRICT — KBA/D

In Connecticut, the Tolland County Chapter of MCEU monitors 11; Lenny Berman is Control Chief, reports Mike Marvonek, KBC0273. Chartered this April, club membership is drawn from Rockville, Mansfield, Stafford, and West Willington. Ralph LaFlemia, 1Q5255, serves as president.

The Bell City CB Club of Bristol, Conn., packs a lot of variety in their club record of community service—traffic control, relaying golf match to local radio station, missing person search, and relaying election returns to news media.

All reports indicate the Third Annual State of Maine CB Jamboree was a whopping success! Many door prizes were drawn—a Hallicrafter was awarded to KBA0366 of Medford.

The first jamboree sponsored by the North Shore Crystals was attended by some 500 persons. McWilliam Hinkley, of Gloucester, frequently drew gales of laughter from the crowd with his spiced witticisms. Fifty-eight merchants donated 85 items for prizes. A Sonar was won by a Gloucester CBER, Woodrow Greek.

Two members of Pine Tree 5 Watters REACT, Don McCaun, KBC0810 and our CCM KBC0238, copied Jim Kye from Governors Harbor, Bahamas. The Pine Tree 5 Watters' affiliation with REACT became effective in August. During the summer months, this club assisted many mobile units with motel reservations and highway directions.

An RCA MK VIII was used for flight control between KBC3782 base station at Molasses Pond and 1Q7202, a Johnson essenger in a Piper float plane. Pilot Frank Andrews, who serves the Pine Tree 5 Watters as treasurer, ferried club members to their picnic at Story Jones' cottage.

SECOND DISTRICT — KBG/H

After visiting the Brooklyn Chapter of the CBRRL, our CCMs Mr. and Mrs. Lombardi, had much to report on this club. The Brooklyn Chapter is the mother chapter and organizer of the national organization now comprised of nine Chapters on the northeastern seaboard. Since its beginning, the Brooklyn Chapter has tried to maintain a close relationship between its members and those of other nonprofit organizations. This year, they have worked in conjunction with the American Legion to gather toys for needy hospitalized children. Club meetings are of three types: technical meetings with a staff of three CB technicians; social meetings where their entertainment committee outdoes itself each time; and business meetings. The Brooklyn Chapter of CBRRL meets fourth Fridays at 9002 4th Ave.

There's a new chapter of CBRRL in New Jersey—the Bergen Passaic Chapter which meets third Tuesdays in East Paterson at Lee St. and Spidel.

After a two months vacation, the Tri County CB Relay Association of Maywood, N. J. began their Fall program with a membership drive.

Sundance lake was site of jamboree for the Bergen County CBERs chapter of MCEU.

A catchy slogan coined by the Suffolk Emergency "SERAC CARES for You 24 Hours a Day." (Need

we point out that SERAC spelled backwards is CARES?) Thanks to Henry Pearsall, of Bohemia, for word on this club on the south shore of Long Island.

A two part feature story on CB appeared in the New York World-Telegram. Newsman Ed Wallace quoted Edward Dunnivant of the Queens Chapter, CBRRL: "People actually want to help other people, but the world is going so fast they don't know how or when to make the move. Citizens Band has not only brought back the old partyline sort of gossip and curiosity—it is a new way of being a Good Samaritan." Our thanks to Henry Bryniarski, KBG3574 for sharing the story with us.

THIRD DISTRICT — KCC/D

Ronald Sellers, KCC3373, had the shortest assignment on record as our CCM for this call area. Ron took Uncle Sam up on his invitation to see the world and joined the Navy in August. Ron promises to send in CB news when he can; in the meantime, any volunteers for this area?

SIXTH DISTRICT — KDB/C

The "Tube Poppers" Citizens Radio Emergency Service of Royston, Georgia announce these new officers: president, Terrell Brown KDD1160; vice-president, Roy Wilburn 6W4788; secretary-treasurer, Max K. Strickland KDB8580, emergency communications director, Kenneth Dove KDB3003; and reporter, Eugene Roach 6Q3428. The club recently moved its headquarters to the City of Franklin Springs, Georgia where it carries on a monitoring service. The antenna is mounted on a 125 foot water tank overlooking the beautiful foothills of northeast Georgia. All CBERs in the area are urged to visit the headquarters. Tube Poppers monitor channel 11.

A large crowd of CBERs from Georgia, Illinois, and the Carolinas gathered at Lake Hartwell for the Hart County CB Club's jamboree. Current project for the club is a CB headquarters in downtown Hartwell. Mr. George Walters is president of the club and is doing a fine job.

From Jesup, Georgia, club secretary Louis Weiland, KDD6132, writes that new officers for the Altamaha CB Association are: president Melvin Weiland, 6Q6150; vice president, Don Wellons, KDD5104; and treasurer, Bill Roland, KDB5945. The Association has committed itself to work with CD and any local emergencies, they will also work in conjunction with the Auxiliary City Police.

Last April, a charter was granted the Spartanburg Radio Emergency Associated Citizen Team. REACT headquarters are located in the county seat of the northwestern county in South Carolina. Linked with clubs in Greer and Woodruff, the Spartanburg REACT provides county wide communications by monitoring channel one; three is the working channel. During a recent suspected drowning, Spartanburg REACT had five mobiles at the scene, three base stations with phones rounded up men, equipment, diving gear, and nourishment for the searchers. About 17 searchers were involved over a period of three days and nights before the victim was found. Chairman C. E. Jarrett says visitors are welcome at their

meetings every first, third, and fifth Thursday nights.

In the Memphis Radio Citizens Bank newspaper, Lolly Nilson, KDB7484, rated the club's dinner-dance "an everlasting memory" for the more than 160 in attendance. Installation of new officers was administered by Commissioner Bill Farris.

SEVENTH DISTRICT — KDH/I

"CB Squelch" reports the affiliation of Broward Citizens Radio Club with their local Civil Air Patrol Squadron. Through the efforts and guidance of the CAP the BCRC can offer its memberships active participation of a trained team of communicators plus the adventures of education in all phases of electronics. Capt. Britton was assigned as instructor for the BCRC Squadron.

H. A. Howell, KD10153, edits the "CB Communicator" for Sarasota's Shoreline CB Club. Club officers are: James Kelly, president; Dallas Adkins, vice president; Dick Hopkins, secretary; Bob Richardson, corresponding secretary; Bonnie Howell, treasurer; Jim Prideaux, parliamentarian; and sgt. at arms, Bill Schob.

EIGHTH DISTRICT—KEA/B

Cenla CB Radio Club, located in Alexandria, La. meets second Wednesdays. The club's calling and monitoring channels are 11 and 16. Organized in June of this year, club is guided by this slate of officers: Robert Brewer, KEA0115, president; Jim Smith KEB2291, vice president; Charles Pospisil KEA2231, secretary; Jack Taylor 8W1725, treasurer. These ladies comprise the publicity committee: Ruth Brewer, Salmone Smith and Mary Bills. Their club is registered with the Alexandria Chamber of Commerce, an idea we heartily endorse!

NINTH DISTRICT — KED/E

A group from the San Antonio Parachute Center, KED1818, performed skydiving feats for Texas

Governor Connally and a large crowd at the July Aquarena in San Marcus. They jumped from 13,000 feet, and after a free fall of two miles, opened their chutes at 2500 feet. They were jumping as members of the Texas Air National Guard 149th Fighter Squadron Parachute Team. A freak wind wind caught Malcolm Thompson, Jack Reid and Terry Osland, causing them to miss the target. Capt. Thompson received a broken shoulder from a tree landing. The other two were only slightly shaken up. This group uses CB walkie-talkies with each jumper and a mobile rig on the ground in the drop zone.

The Texas County Radio Association furnished communications for sports car races at Austin. This organization, with president Art Hall, 9Q0104 and sports chairman Paul Jordan KED0831, furnish valuable CB communication assistance at many auto and boat races.

CCM John Hudson 9Q0026 would like to hear from club secretaries and publicity chairmen in this area—get your news in to him so our readers will know what's going on in your area.

TENTH DISTRICT — KEG

Candid snapshots of the best quality are featured in the monthly publication "11-4" edited and published by Marvin Southwick 10Q2797 of Tulsa, Oklahoma. Besides reporting CB activities in the Oil Capitol, "11-4" covers the doings of several other northeastern Oklahoma clubs.

ELEVENTH DISTRICT — KFA

Formal installation of their new officers was observed by Citizens' Assistance Relay League at their dinner meeting in July. The second slate of officers for this year old club in Long Beach include: Gene Petersen KEJ4667 U2, as president and Herb Wright, 11Q5067 as vice president. Three CARL members have been appointed communication committee members for South Gate 335 American Legion Post by John Davies, Post Commander. Chairmen Herb Wright 11Q5067, and his

CLASSIFIED

BECOME A RADIO AMATEUR. Learn International Morse Code, quickly and easily, improve speed and accuracy, by simplified method. Only \$3.00, KINSEY'S, BOX 61, ONEONTA, NEW YORK.

NEW "MINI-CALL" Decal Offer! Attractive miniature 1" high individual gold/black decal letters for labeling equipment, door and desk markers, etc. Premium quality, striking appearance. 3 SETS of your call letters and numerals only \$1.00 postpaid. DELUXE "MINI-CALL" — as above, but dry (pressure-sensitive) mount. Combination gold/white/black face. 2 SETS only \$1.00 postpaid. PRINT CALL PLAINLY. RODGER NORDLUND, 18Q5121, 7635 W. IRVING PARK ROAD, CHICAGO 34, ILLINOIS.

CB Transmitters \$6.00. Other bargains, send 10c for list. VANGUARD, 190-48—99th AVE., HOLLIS 23, N.Y.

1964 QSL Catalogue. New designs. 10c. LONGBROOK, BOX 393-B, QUAKERTOWN, N.J.

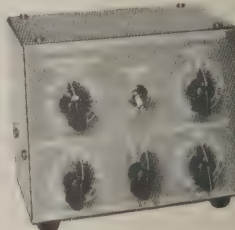
QSL CARDS — Commercial Printing Prices Available. Write SCHUMAKER, BBI PRESS, BOX 568, MAYFIELD, KENTUCKY.

NEW CB LOG BOOKS — Fifty pages of spacious entry forms. 65c postpaid, coins acceptable. ELANEM, 1116 INWOOD, PLAINFIELD, N.J.

OOPS!

On page 39 of last month's issue of CBH we inadvertently switched the photos of Elenco's Power Gainer and their new Linear Amplifier. The units are shown below, correctly identified.

POWER GAINER
(Shown at right)
Audio Compression
Amplifier, available
for use with 110, 6
or 12v. All models.
\$45.00



LINEAR AMPLIFIER
L-200-AM, shown at
left, less power supply — **\$150.00.**
L-200-A with built-in
AC supply for base
use, **\$225.00.**

For further details
see advertisement on page 27 or write—

Electronic Engineering Co.
Wabash, Indiana

CONTINUED — page 57

committee of William Gerhold KEJ6438 and Gerry Oedekirk KEJ3925, were delegated to form a communication center for the Post.

Full support and cooperation was pledged by the Southern California CB Association to the Sheriff's Communications Auxiliary whose membership includes qualified CBers throughout San Diego County. The SCA has experienced successful training exercises and weekend call-outs. SCA Directors are Carl Wallace KEJ3298 and Tom Brasher 11Q1990.

FOURTEENTH DISTRICT – KFI

Tacoma CB Radio Association provided traffic control and other assistance at Thun Field during the National Air Show. This club project was under the direction of their active Services Committee which is also planning to conduct a First Aid Course for interested TACBRA members. Bill Lane KEE0109 is Services Committee Chairman and coordinates the organization of their search and rescue team. A dock fire in Tacoma gave TACBRA its first actual test in handling emergency communications and traffic control.

FIFTEENTH DISTRICT – KGB/C

The Aurora, Colorado CB Association's meetings are held the first and third Mondays of each month. Club elections are conducted twice a year. Currently serving as president for the club is Pete Natitus, KGB1690. Ron Pearson, KGC0495, is vice president; Barbara Alumbaugh, KGB0964, secretary; Dad Speer, KEH1914, treasurer. The Aurora CB Association is very active in civic affairs and visitors are always most welcome. In the Aurora area the calling channel is 11.

When the summer vacation season ended, the Boulder County CB Club resumed its club activities. We expect to have news from this club now that its Fall program has begun.

SEVENTEENTH DISTRICT – KGH

Guess who won first prize at the drawing conducted by the North Iowa CB Radio Club at their August picnic! None other than your ol' CCM—James Leversee. Second and third prizes went to Gordon Taylor 17W5896, of Mason City, and Mrs. Marion Olsen 17Q3080, of Rockwell. George Bebout KGH1924 won a prize for traveling the longest distance—from Waterloo, Iowa to the Clear Lake State Park in north central Iowa. Numerous other prizes were drawn. Other towns represented at the pot-luck style picnic were: Forrest City, Garner, Kanawha, Ventura, Marble Rock, Klemme Rockwell, Janesville, and Titonka. To president Ernie Cory KGH0820 and all the Mason City area club goes the credit for a highly successful affair.

D. J. Snider, 17Q3078, of Healy, Kansas, reports the Fire County CB Club has an ever growing membership which now stands at 85. Club officers are: Lee Dechart, George Harmison, Ernie McVickers, and Mr. Snider. The Board of Directors is comprised of Horton Schull, Vic Penka, Marvin Trochmel, and Dewain Betz. At a recent club meeting held at the Beeler High School, guest speaker Chet Touquet discussed ways CB'ers could help Civil Defense.

Union State Park near Gladbrook, Iowa was the scene for the annual statewide picnic sponsored by the Northeast Iowa Citizens Banders. Lucky winners of transistor radios were Jim Schackow and Dale Weise.

EIGHTEENTH DISTRICT – KHA/D

Citizens Radio League of Chicago sponsored a picnic at Camp Fort Dearborn located on the Des Plaines River. Door prizes, a swap table and games for all provided the day's entertainment.

An informative, well-written article entitled "CB Goes Marine Mobile" appeared in a recent publication by the Illini Class "D" Radio Club. Article was by-lined John and Irene Lenk and the two page writeup was a fine service for the CBers in Champaign County.

Mike Swider, editor of "The Kickapoo 5-Watter News" wrote a clever article entitled "Obituary Almost" dealing with that all too familiar theme—disinterested club members. KHC6258 says the only medicine to keep a club out of a real obit-

- ☐ TURNER 555C MOBILE Microphone (push to talk) SALE \$5.99
- ☐ Tokyo Rose Studio Microphone with switch \$5.88
- ☐ ASTATIC 333 Ceramic Microphone (\$10.53) \$4.99
- ☐ Euphonics C47 Communications Microphone (with switch) SALE \$5.99

SALE ON COAX CONNECTORS

PL-259 39c ea, 10 for \$3.50 UG-175 14c ea, 10 for \$1.19
PL-258 49c ea, 10 for \$4.50 UG-176 14c ea, 10 for \$1.19
SO-239 39c ea, 10 for \$3.50 M-359 49c ea, 10 for \$4.50
DM (Double Male) 95c ea 10 for \$8.50
M-358 \$1.89 ea 10 for \$17.50
PP-677 ADAPTOR (coax plug to auto radio socket) 89c ea 10 for \$7.90

SALE ON ULTRA LOW-LOSS FOAM COAX CABLE

RG58u—50 ft for \$2.49, 100 ft for \$3.99
RG8u—50 ft for \$4.95, 100 ft for \$8.99

COMMAND CB CRYSTALS (Specify make, model, channel)

12 or more, assorted channels EACH \$1.39

Check items wanted. Return ad or order with check or money order. Include postage, excess refunded. 50c service on orders under \$5.00. Beams and large antennas shipped Railway Express. 50% deposit on C.O.D.'s Send postcard for latest Catalog.

GROVE ELECTRONIC SUPPLY COMPANY

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*Increase your business efficiency,
safety and pleasure!*

KAAR CB RADIO



TR327

Universal power supply / Snap-in, snap-out mountings / Plug-in portability / Dust protection / Time-proven reliability.

- ✎ **TR327B**—Tops for CB enthusiasts.
All 23 CB channels tuneable!
- ✎ **TR327**—Ideal for Industrial Use.
Exclusive front panel loading control!
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CB plus standard AM broadcast band!



Write for **FREE Business and Citizens Comprehensive Frequency Chart.**

KAAR ENGINEERING CORP.

2997 MIDDLEFIELD ROAD
PALO ALTO, CALIFORNIA

uary column is **participation!** We'd say this is a prescription needed by many CB clubs—not just the Danville, Illinois membership.

"Radiogram", published by Morgan County CB Club, reports the community of Paragon, Indiana added thirteen C B stations in three months! After one of their meetings, the Paragon CB Club held a fox hut. There was a little difficulty in finding the fox as he (18Q9517) hid in a barn north of town.

NINETEENTH DISTRICT — KHG/J

The South-Lynd Radio Club of Lyndhurst, Ohio celebrated its first birthday September 18. As a birthday gift to themselves, members purchased a CB test meter. The "Newsgram" put out a special edition of eight pages in commemorating the event. The editors are interested in exchanging papers with other CB clubs. Mailing address is 1815 Beaconwood Road, South Euclid, Ohio.

Your CCM Max Schneider, and several South-Lynd Radio Club members attended the picnic sponsored by the Hall of Fame Radio Club and the Citizens Radio League of Ohio. The well organized affair was held at the Stark County Fairgrounds in Canton. Several hundred people attended and QSL cards flowed like you know what. A tip of the hat to the workers responsible for planning the picnic.

Red Cross First Aid courses were made available to Cereal City Citizens Radio Club of Battle Creek, Mich. CCCRC is considering starting a ladies auxiliary. CB'ers in the Battle Creek Marshall area who are interested in taking code classes for their ham ticket should contact Walt Wilson at he Calhoun County Amateur Radio Association, 117 E. Michigan Ave. in Marshall.

"The Transmitter" reports the Ingham County CB Club will have their emergency vehicle ready very soon, look for the red, white and blue van.

Following suit with many clubs across the country, the Macomb CBers of Mt. Clemens, Michigan have posted five road signs showing their monitoring channels. Here's a gimmick this club uses at their meetings, held a second and fourth Wednesdays at the Terrace Gardens: at the first meeting of each month, the club elects a "CBer of the Month" who receives a beautiful plaque and one month's free dues. The club is in the process of building a communications trailer.

TWENTIETH DISTRICT — KIC/D

The CB Rangers Emergency Squad put their rigs to a novel use when they handled communications for a sports car endurance rally. With the aid of CB, the event was handled with great efficiency. The club received a card of thanks from William Beatty for the help two members gave in herding some stray cattle.

Krystal Krackers of Oneida enjoyed their third annual picnic at Summit Park. President Jack Marshall cautioned members on the great danger of transmitting while gassing up mobiles. KIC0410 Bob Dixon and XYL spent three weeks touring Florida and southern states—the Krackers are looking forward to some great stories from the Bixons.

◆ PRECISION CB CRYSTALS ◆

MANUFACTURED TO WITHSTAND EXTREME CONDITIONS AS REQUIRED WITH CB EQUIPT.

PRECISION CRYSTALS AT NO EXTRA CHARGE!

- Extremely accurate tolerances meet or exceed .005% FCC requirements.
- Over 20 years of commercial and military experience packed in each crystal.
- One Year Factory Warranty.
- Special discount to recognized clubs when order exceeds 25 pieces.

\$195

each

(add 10¢ per crystal for postage and handling — add 5¢ per crystal for .093 pins when required.)

All CB orders should include make and model of equipment and whether for transmit or receive. Send M.O., Check or Cash with order. Sorry, No C.O.D.'s Accepted.

SUN CRYSTAL CO.

P.O. BOX 301

NO. MIAMI 61, FLA.

AUGUST ADDENDUM

In any worthwhile work consisting of several hundred products, their specifications and their applications, the opportunity for error is always great.

In our August Directory issue of CB Horizons we had a few errors, and since the Directory has been released, we have a few additional products to add to the list of those displayed there.

Readers are referred to the Directory issue while checking this 'Addendum' listing.

CORRECTIONS—

Under **Knightkit (Allied Radio)**, transceivers (pages 36 and 37), delete the listings for models C-11 (kit) and C-27 (kit) as neither unit is currently available.

Under **E. F. Johnson Company**, page 36, delete the photo shown of the model messenger Two. This is the model 202 business band unit, not the Messenger Two.

Under the **Pearce-Simpson, Inc.** listing on page 41, change the address for this corpora-

tion to 2295 N.W. 14th Street Miami 35, Florida.

Under the **Osborne Electronics Corp.** listing, Page 41, the copy should be changed to read that there is a total of 17 transistors, not 7 as listed. And the unit sells for \$249.50, not \$179.00 as listed.

Finally, to those who have asked about the apparent mix-up between pages 38 and 58, be advised that the copy on page 58 belongs on page 38, and the copy on page 38 belongs on page 58!

ADDITIONAL LISTINGS

ELECTRONIC WHOLESALERS, INC.

2345 Sherman Avenue, N. W.

Washington, D.C.

"BIG-E"

12 channel transmit crystal control (11 internal positions and one external socket) plus 23 channel tuneable receiver. Dual conversion super-het receiver, dual series gated noise limiter. Sensitivity of 0.5 uV or better. Press to talk ceramic mike. Crystal spotting switch for tuneable receiver. Powers from 6 vdc, 12dc or 117 vac.

"BIG E"\$119.95

ADDED POWER FOR BUSINESS RADIO

WITH NEW **LINEAR R.F. AMPLIFIER**

**STRONGER
SIGNALS
•
LONGER
DISTANCE**

**FCC
TYPE
ACCEPTED
for
AM & FM**



150 WATTS IMPUT
when used with BR-20

Now you can receive and call from greater distances with a stronger signal. Together with Sonar BR-20 Business Radio or any other transmitter capable of 1-10 watts drive you will be able to communicate with ease. Designed for top performance and dependable service when you need it. This power packed matching BR-21 has features to spare: 1-10 watts R.F. to operate • automatic standby/transmit keying • covers entire 25-50 MC range • Forced air cooled for continuous duty • Weight, 12 lbs. • Size: 4 3/4"H x 8 3/4"W x 10 3/4"D. • Increased range for low power base stations and mobile*

BR-21 Linear R.F. Power Amplifier complete with co-axial cable and connectors \$15950

*available for 12V at a slightly higher price

SONAR RADIO CORPORATION

73 Wortman Avenue Brooklyn 7, New York

IF YOU SELL, SERVICE OR GIVE ORDERS, YOU NEED SONAR BUSINESS 2 WAY RADIO...

25 - 50
MCS
14 WATTS
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TRUCKING

A complete power-packed dependable performer!

Amplitude Modulated

Quality designed and engineered for years of service and dependability
• Compact and lightweight • Easily installed in smallest vehicles • Smartly styled for office use • Greater range because of Voice-Power designed circuitry • Unexcelled reception
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• 1 year warranty • 12 VDC or 117 VAC and 6 VDC or 117 VAC operation
• Size: 11 3/4"L x 9 1/2"W x 4 3/4"H • Weight: 10 lbs.

BR-20 Business 2 Way Radio complete with mike, 2 crystals and 2 power cables \$22950

100 and 1 uses in every type of industry and business

- Delivery services
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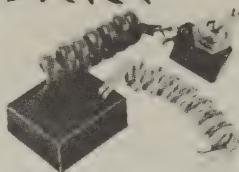
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73 Wortman Ave., Brooklyn 7, N.Y.

Please send me complete information on Business 2 Way Radio BR-20 Dept. 255

Name
Address
City Zone State

STOP THAT **NOISE** NOW!

- For Hams, CB'ers, etc.
- Suppresses Noise From Any Type Ignition System, Motors, Atmosphere



The KOLIN NL-1 solid state noise limiter is an extremely effective self-adjusting device, which suppresses impulse noise in your receiver when receiving AM. Small enough to mount directly inside most receivers, it will work on any supply voltages from 6 to 220 volts AC or DC. Only 3 connections are required. A switch is provided to disable unit in normal quiet areas. Works on tube or hybrid receivers that employ a diode detector. All necessary instructions and mounting facilities are supplied.

SIZE $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{2}$ " NL-1 \$7.95

The NLT transistorized noise limiter for most transistor receivers suppresses noise while increasing the signal strength. Operates on 6 to 15 volts DC. Specify positive or negative ground when ordering.

SIZE $2\frac{1}{4} \times 1\frac{1}{2} \times \frac{3}{4}$ " NLT \$14.95

See your local dealer or send direct to:



ENGINEERING COMPANY

Box 357 C Bronxville, N.Y.

MANUFACTURERS OF SEMICONDUCTOR AND COMMUNICATIONS PRODUCTS



XMAS GIFT DELUXE \$16.95

WALK-A-PHONE

Manufactured in U.S.A. Five Fully Operating Transistors Quality Engineered for Super Sensitive 2 Stage Regenerative Receiver — High Level Talk Power — Operates on Channel 21 — 2.5 Inch Ceramic Speaker — Microphone — No Adjustments — Removable 35 inch 5 Section Whip Antenna — One Mile Range — Battery Included — 90 Day Warranty.

\$16.95

CB PORTABLE MODULATION AND RF CARRIER METER

Directly Reads % Modulation on 4 1/2 Meter — Indicates Relative RF Carrier for Tune-ups — Absolutely No Connections to Rig — Completely Transistorized and Portable — Perfect for Walkie-Talkies or 5 Watt Rigs — Model MC 27 — Made in U. S. A. with all American Material.

\$23.95

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CHECK OR MONEY ORDER ONLY.

G. R. S. NOTES

Harold Merton, XM44042

Top story for Canadian CB'ers this month is the Department of Transport's monitoring station at Strathburn, Ontario going up for sale to the highest bidder. The site, familiar to hundreds of G.R.S. and other radio users has been a landmark with it's high towers sitting right on No. 2 Highway less than 100 miles from the Detroit-Windsor border. Operations of the station have been transferred to Acton, Ontario, a small community only a few miles north of Toronto. Toronto is considered the center of G.R.S. operations in Canada as this city, the capitol of the province, is the most heavily populated in the country when it comes to G.R.S. transceivers.

Approximately twenty St. Thomas, Ont., CB'ers sponsored a mobile excursion and get-to-gether for G.R.S. users in the area and written invitations were sent out to all district users. Forty-five mobiles attended; many with several people in each, due to the great distances some traveled. Two lost children were located in the city of 25,000 people in 21 minutes, which gave the people good experience in a search of this type. The group then attended the weiner and corn roast, followed by a dance. Congratulations to XM441000, Gerald Inch of St. Thomas, on a tremendous get-to-gether and the others who assisted him in this good will gesture.

A new CB radio group has formed in the City of Toronto. Called the "West Toronto CB Radio Group," the official formation meeting took place on October 4th, with 52 inaugural members present. The following GRS boys were elected to posts with the new association: Dave Massam, President; Ron Moriarty, Vice President; Michelle Moriarty, Secretary; Jerry Szafinski, Treasurer and Phil Merchant, Sr., as Executive Member.

Mailing address of the new association is 245A Gary Drive, Weston, Ontario.

That's it for this month, remember if you have any news of G.R.S. in Canada drop a note in the mail to XM44042 so we can include it in the column.

CB'ers — Our easy-do Dual Conversion adapter kit improves selectivity, increases sensitivity. Often copied but never duplicated. For HE-15, A, B; 800; 910, A, B; HE-20, A, B, C; Mark VII; 770, 1, 2; Messenger; GW-10 etc. \$15.00, with tubes \$17.50. Also, Speech Clipper-kit complete \$17.85 or \$5.00 deposit plus C.O.D. Results! Not promises. There is a difference. Free literature, Dept. No. 12H, BAINBRIDGE RADIO ELECTRONICS, 2839 BRIGGS AVENUE, NEW YORK 57, N.Y.

3 INCH NUMBERS & LETTERS. Guaranteed to stick. Weatherproof. Waterproof. Brilliant silver reflection. Your call sign \$1.00 postpaid. Dealer and CB club discounts. Free sample. Write DYMOND SIGN DISPLAY, 4214 S. CEDAR STREET, LANSING, MICHIGAN.

QSL's. Gorgeous 5 and 6 color rainbows for 2 color prices. Beautiful quality. Immediate service. Samples 10c, Refundable. HARMS, KD11143, 905 FERNELD, EDGEWATER, FLORIDA, 32032.

CB QSL's. America's finest economically priced QSL cards. Fast service. Free samples. PAUL'S LITTLE PRINT SHOP, BOX 9363, AUSTIN, TEXAS.

PRINTED ENVELOPES, Card Size, Name, Address, Number, Membership, Etc. 200 - \$3.00 Prepaid, REGAL PRESS, CROOKSVILLE, OHIO.

"ALTERNATOR FILTER" — Available from us only. The original designers and manufacturers, \$2.50. Also Voltage Regulator Filter, \$2.50. Highest quality. ENGINEERED PRODUCTS COMPANY, SPRINGBORO, OHIO.

CHRISTMAS CARDS especially for CB'ers! Your call, name, etc., design in sparkling white Snowprint on lustrous Christmas red or green cards. Free samples. 5 day service. 3-D QSL, BOX 152, M.O., SPRINGFIELD, MASSACHUSETTS, 01101.

2 COLOR GLOSSY — 100 for \$2.50. Samples dime. RAMSBOTTOM PRINTING, BOX 237, KIRKSVILLE, MO.

CB QSL CARDS. New, Kute, Klever, Komical designs. Reasonable prices. Brilliant colors, including beautiful Silver and Gold. Samples FREE. HELLWIG, BOX 425, LAKE WALES, FLA.

CB QSL's CALL-D-CALS — "The best for less" Custom Artwork or Stock Designs. Fast Service. Special — 100 3 color Glossy Cards \$3.20. Samples and free 10 Code Card — 25c. "Refunded." DICK STAUFFER, 19QA0625, 1996 N. M-18, GLADWIN, MICHIGAN.

Convert the inexpensive surplus BC-659 to CB with crystal filter, AVC, squelch, bias, Electronic push to talk, xtal controlled receiver, 2 RF's, 14 tube operation. Conversion parts kit and plans \$20.60. Plans only \$2.00. JAY'S CB SERVICE, P.O. BOX 173, CITRUS HEIGHTS, CALIFORNIA.

YOUR CALL in handsome 3" high, 1 1/4" wide individual gold face, black outline decal letters. Apply to inside or outside of glass, on metal, wood, etc. Print your call plainly. 1 set of letters and numerals for any CB call—\$1.00; 2 sets—\$1.50. Postpaid. RODGER NORDLUND - 18Q5121, 7635 W. IRVING PARK ROAD, CHICAGO 34, ILLINOIS.

CB-QSL Cards, 45 designs, free brochure. WOODY, 2611 SHENANDOAH, ST. LOUIS 4, MO.

CLUBS: New Illustrated Literature. Badges — Decals and all the "Goodies." ERROL ENGRAVING, ATT: KBC0264, WESTFIELD, MASS.

CAR TAGS with your call letters. Heavy embossed steel, same size and shape of your state tag. Fits front of all cars. Black on white—baked enamel finish \$2.00 ea. PPD. Quantity prices to clubs. Columbus Marble Works—Columbus, Miss.

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CALL CARDS — Badges — Decals — "Goodies." Illustrated Literature with samples 25c. KBC0264, ERROL ENGRAVING, WESTFIELD, MASS.

CB QSL Cards. Quality Work, Fair Prices, Prompt Service. Samples 10c (Refundable). HUTCHINS BROTHERS, THORNDIKE, MAINE.

CB QSL CARDS . . . Highest Quality . . . BROWNE W3CJI/3W1974, 3111-C LEHIGH-ALLENTOWN, PA. 24 page cut catalog with samples 25 cents.

CB'S — Colorful rainbo calls, space age, comic. Samples 25c (deductible). C. FRITZ, BOX 1684, SCOTTS-DALE, ARIZONA.

DECALS, DECALS, DECALS, DECALS, DECALS. Your call letters on beautiful 2" Gold decals trimmed in black, ideal for Mobile or Fixed Station, only \$1.00. RAMCO, BOX 356-D, NO. HOLLYWOOD, CALIF.

FCC WARNING DECAL against unauthorized use, 2x3 35c — 4/1.00, 3x4-.65c — 2/1.00. BOX 457, ENCINO, CALIFORNIA.

FREE CB QSL SAMPLES — From \$2.00 per 100, RADIO PRESS, BOX 24A, PITTSOWN, N. JERSEY.

FREE SAMPLES & CATALOGUE — CB QSL CARDS \$2.50 per 100 in 3 colors. GARTH PRINTING COMPANY, BOX 51, JUTLAND, N.J.

CITIZENS BAND QSL CARDS — 100 two-color glossy, \$3.00 postpaid, satisfaction guaranteed. Samples 10 cents. RUSPRINT, BOX 7575, KANSAS CITY, MISSOURI, 64116.

AAA-1 CLIPPER-FILTER, triples talk-power, fits all transceivers, kit \$10.99; wired \$15.99. Heathkit owners, double reception; SK-4 RF Preselector mounts inside GW-12; SK-3 inconspicuously attaches outside GW-10 or GW-11; either kit, \$8.99; wired \$11.99. Revolutionary Hy-Gain rooftop 29" Omni-Topper, \$11.97. DP-2 Coupler-Duplexer kit, \$4.99 or \$4.00 with any other purchase! New! Solid state NJ-7 NOISJECTOR yanks noise out by the roots, just wire it into any transceiver, \$4.49. All postpaid! Free kit, antenna list. HOLSTROM ASSOCIATES, BOX 8640-B, SACRAMENTO 22, CALIFORNIA.

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"NOW" A 23 CHANNEL Position switch to fit 50 or 100 Model International Executives. Get complete enjoyment with this new 23 channel unit. Can be installed in five minutes. \$19.95 postpaid. See your dealer or order direct to B & S ELECTRONICS, P.O. BOX 110, REDWOOD CITY, CALIFORNIA. Dealer inquiries invited. Money back if not satisfied.

QSL'S — SPECIAL KROMEKOTE, Blue Eagle Background, Gold Embossed Confirming Data, 25 — \$2.00 Postpaid, Samples 10c. ANDY'S, 12 BRIDGE, AMSTERDAM, N.Y.

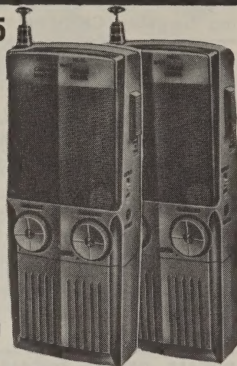
LAFAYETTE LEADS in CITIZENS BAND

LAFAYETTE HE-75
1-WATT
13-TRANSISTOR
"WALKIE TALKIE"

66⁵⁰

2 for 129.00 Imported

- Variable Squelch Circuit
- Crystal-Controlled Receiver and Transmit
- Uses Powerful Silicon Output Transistors
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CITIZENS BAND
TRANSCIVER

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for Use in
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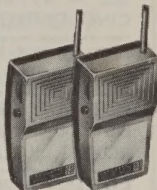


109⁵⁰

MADE IN U.S.A.

FOR THE YOUNGSTERS
NEW! HA-70 3 TRANSISTOR

"WALKIE TALKIE"

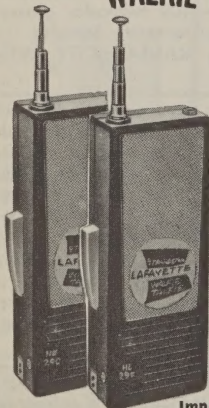


2 for 21.00

- Range Up to 1/4 Mile
- Effective Super-Regen Circuit
- Completely Wired-Ready to Operate

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NEW! LAFAYETTE HE-29C 9-TRANSISTOR CB "WALKIE TALKIE"



Imported

25⁹⁵

2 for 49.95

- Transmits & Receives up to 1.5 Miles
- Push-To-Talk Operation
- Crystal-Control on Both Transmit & Receive
- 115V to 9V Power Pack Optional At Extra Cost
- Complete with Earphone, Leather Case, Antenna and Penlight Batteries
- No License Required (FCC Reg., Pt. 15)

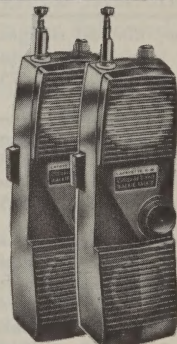
LAFAYETTE HE-100
12-TRANSISTOR
"WALKIE TALKIE"

with Noise Squelch

39⁹⁵

Imported 2 for 78.88

- Separate Microphone and Speaker for Better Modulation and Increased Range
- Crystal-Controlled Transmit & Receive
- Superhet Receiver Has AVC, Push-Pull Audio Output
- Optional Plug-In 117 volt power pack
- Complete with Leather Case, Earphone Batteries and Antenna
- No License Required (FCC Reg. Pt. 15)



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LAFAYETTE RADIO ELECTRONICS DEPT. CBK-3
P. O. BOX 10, SYOSSET, L. I., N. Y.

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SHOWN ACTUAL SIZE

NEWEST!
MOST VERSATILE!
MOST POWER OUT!



The 11 Channel "Messenger III" will change every idea you ever had about what a Citizens Band unit should offer! Tiny, all transistor, it's really quiet, really hot! Interchangeable for base or mobile—use it as a full 5-watt battery powered portable pack set or a 3-watt PA system. Other transistor-type units equalled but didn't exceed the performance of tube-type units—but the "Messenger III", with an aero-space transistor developed for the "Relay" communications satellite, delivers more power output with maximum legal input! Double conversion receiver with high 1st IF provides excellent spurious and image rejection. Set-and-forget "Volume" and "Squelch" controls make it possible for the first time to work "close-in" or at extended range with your initial settings. Furnished with dynamic microphone with "full-grip" push-to-talk bar. Full line of accessories available for selective calling, portable field pack, or public address use!

Catalog No.

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